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- The Editor uses multi-windows, is syntax-sensitive, handles as many files as you like, includes an ARexx interface and supports full keyboard shortcuts.
- The C/C++ Debugger (Developer only) uses multi-windows, with drag-and-drop technology, allows breakpoints, variable tracking and much more.
- The Devpac 3 Assembler is included for low-level work.
- The Easy Object Library (Developer only) is included which eases resource handling and use of data structures (lists, large arrays etc.), along with BOOPSI support, error handling with exceptions and online documentation.
- The Hot Help (Developer only) system can be activated at any time and gives you full, expandable online help even with an ARexx port.

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AGA EXPERIENCE CD VOLUME 1 P106
 This complete commercial package was released just over a year ago - but comes free with this month's Amiga Format and here's where we tell you exactly what you've got.



Nick Veitch
 Editor

Month In View

Could an end really be in sight for the tortuously long "who owns the Amiga" affair?

Rarely is a good word. It is a word that I like to think describes how often we are surprised by events in the Amiga industry. But this is one such occasion.

We were of course aware of the difficulties Viscorp were having in finalising a deal to purchase Amiga Technologies, and it wasn't too much of a shock when we learnt this month that the reason for the delay was a lack of hard cash in the Viscorp coffers.

What did surprise us though was the news that a third party had entered the fray. Although we were aware that Quikpak had vague interests in the Amiga market, being a major Escom creditor, Amiga distributor and manufacturer of

the A4000T, we never suspected they wanted to buy the company.

Even more of a surprise was the revelation that they have already designed two new high-end Amigas, ready for production should they reach a deal with the Escom liquidator.

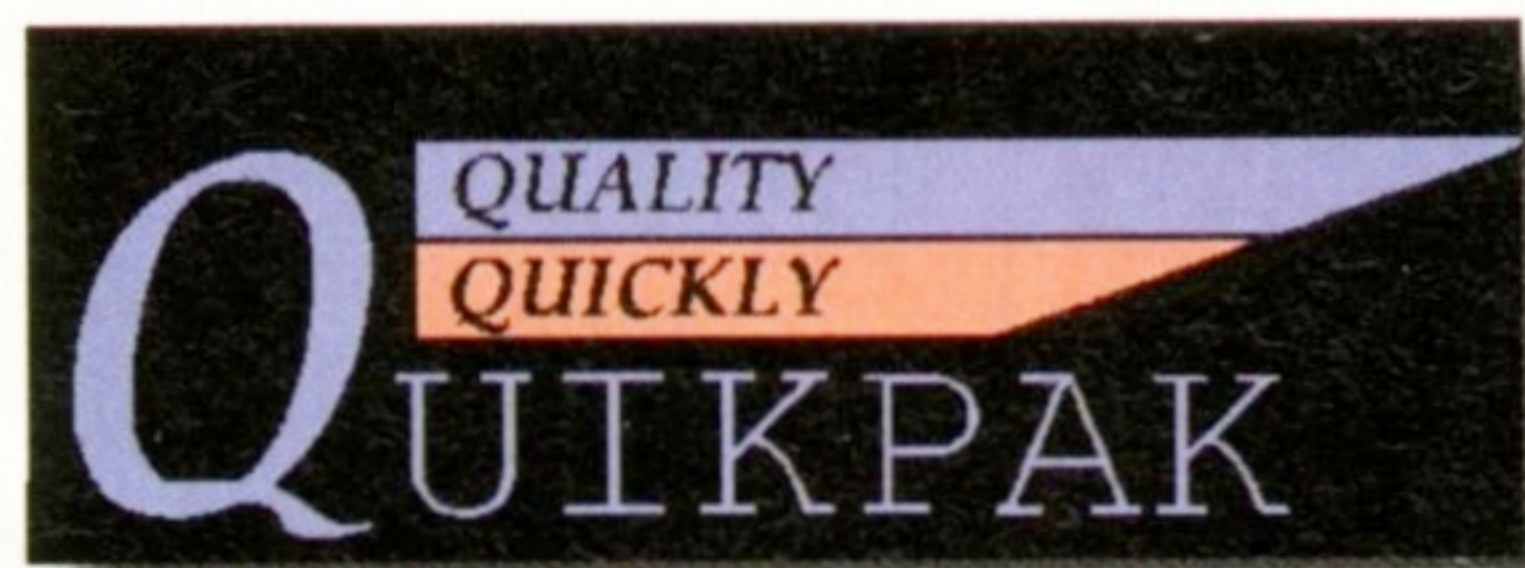
It is a deal which is far from finalised and it would be premature to proclaim that the Amiga's three year game of pass-the-parcel has finally reached the last piece of wrapping paper, but here's hoping. In the meantime, even the suggestion of an end-in-sight is going to bring confidence back to the industry. Here's hoping we have something more excellent to tell you next month...



AF NEWS

11 NEW OWNERS?

Quikpak emerge as buy-out contenders.



12 NET CORNER

A round up of what's new on the web.

14 OOH YOU RUFFIAN

The puzzling platformer finally on sale.

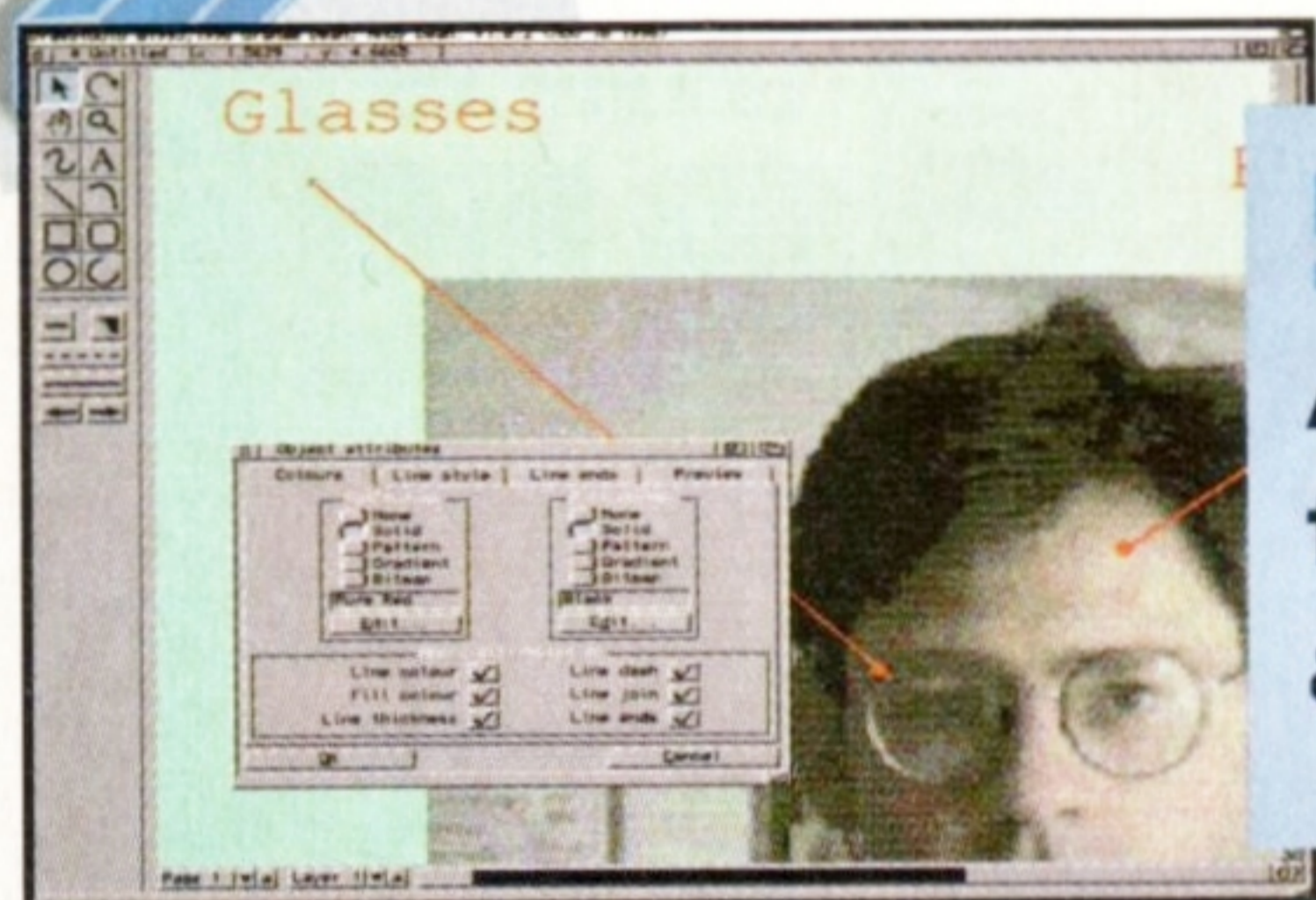
17 SHOW OF STRENGTH

Ben Vost reports back from Cologne.

The crowds thronged, bought and talked. Page 17



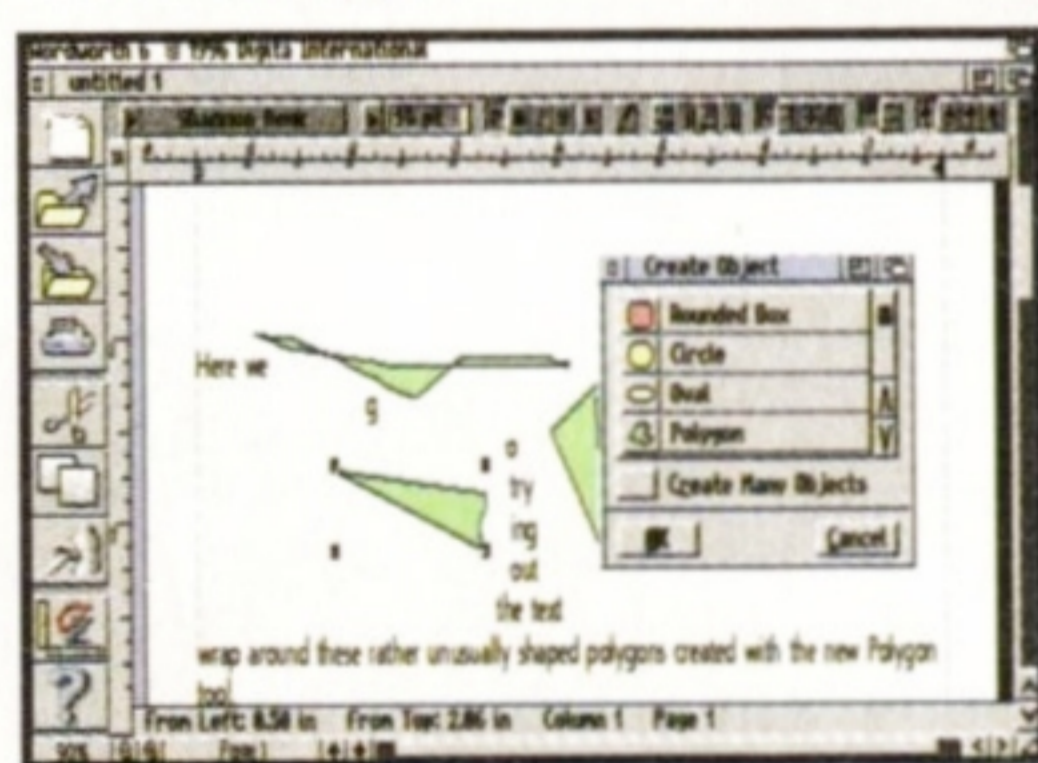
AF SERIOUSLY AMIGA



58 DRAWSTUDIO

At last, a powerful and feature-packed structured art package for the Amiga.

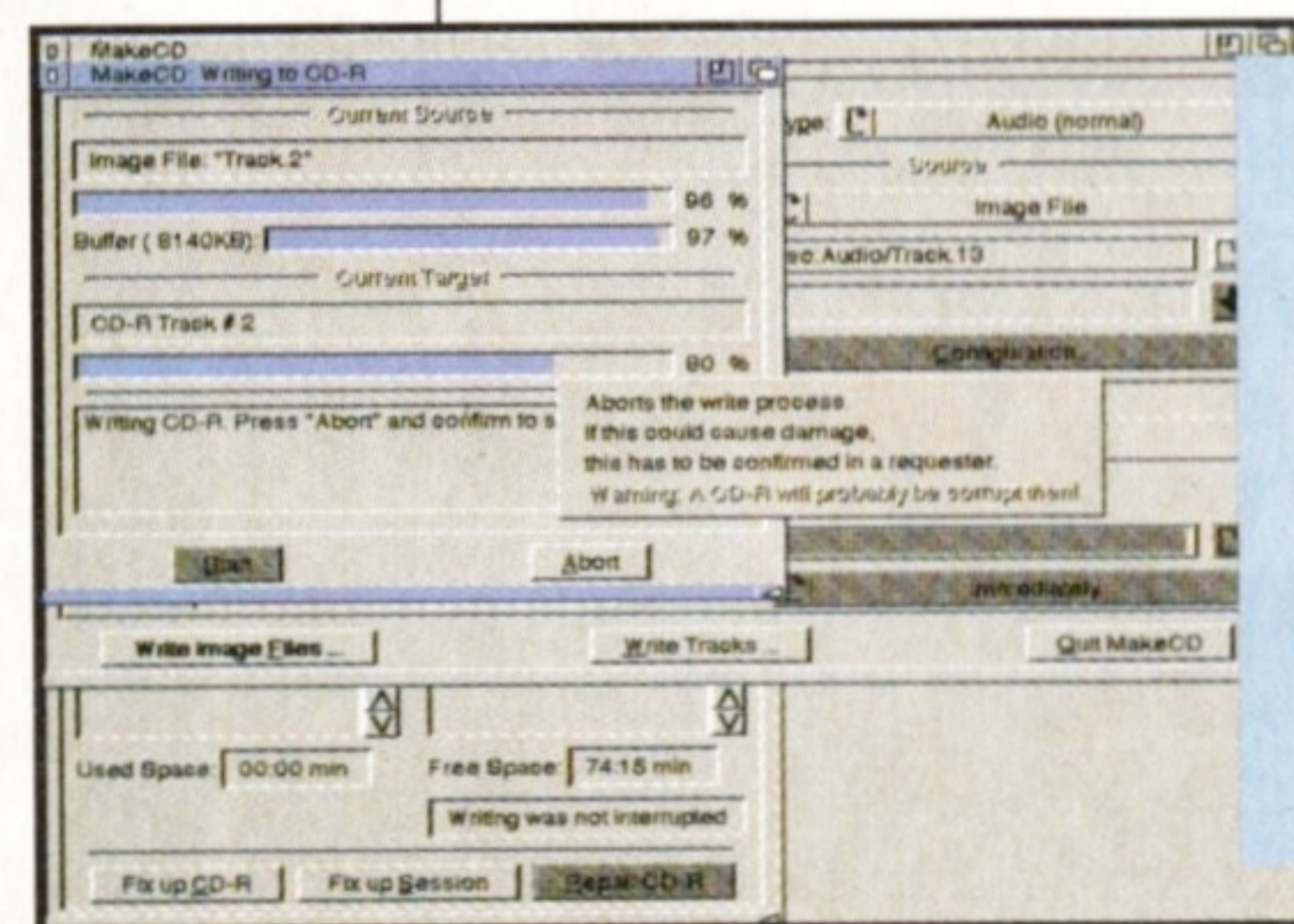
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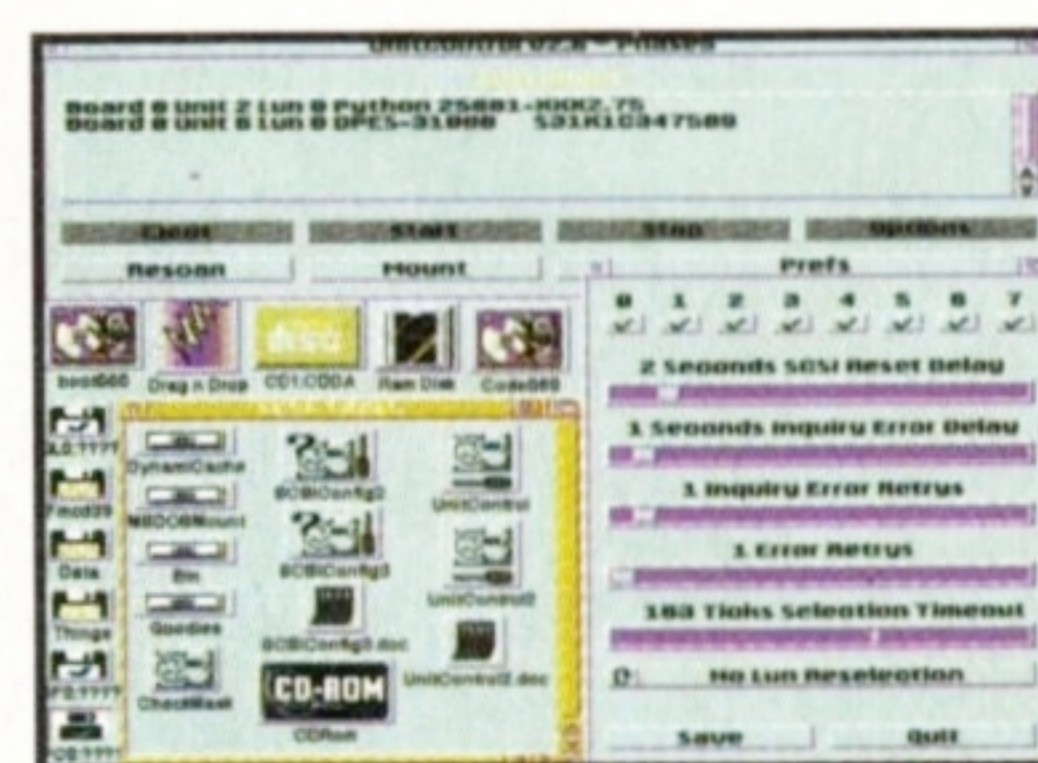
Wordworth 6



66 MAKECD

Finally, a challenger to take on the might of MasterISO. Nick Veitch tests this new CD cutting software.

MakeCD



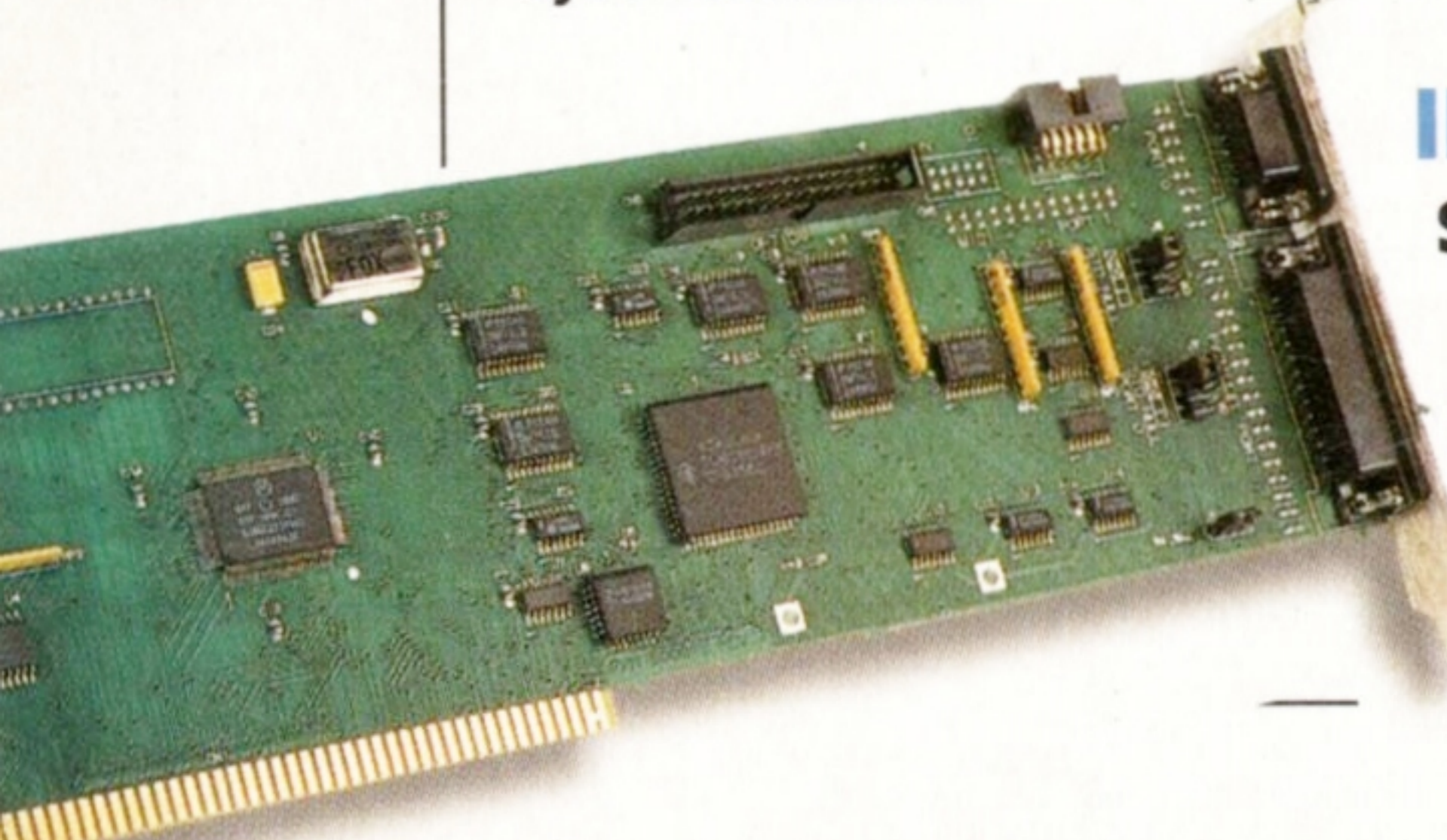
69 CYBERSCSI MK 2

Updated SCSI support for the Cyberstorm accelerator card. Simon Goodwin is very impressed.

CyberSCSI Mark 2

70 ZORRO INTERFACE EXPANSIONS

Simon Goodwin reviews the BSC Multiface 3 and GVP's IO Extender.



AF CREATIVE

86 MUSIC X

Learn how to use this very popular sequencing program.

88 DRAWING A WAGE

How to get started in computer arts.

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Animate your Real 3D creations.

92 AREXX

Paul Overaa tackles recursive tree sorts.

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Adding special effects to your presentation.

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John Kennedy adds buttons and gadgets.

AF REGULARS

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Festive fonts and Xmas clipart plus all you ever wanted to know about colds and flu.

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Our experts give you the answers.

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Darren Irvine scours the net.

80 SUBSCRIPTIONS

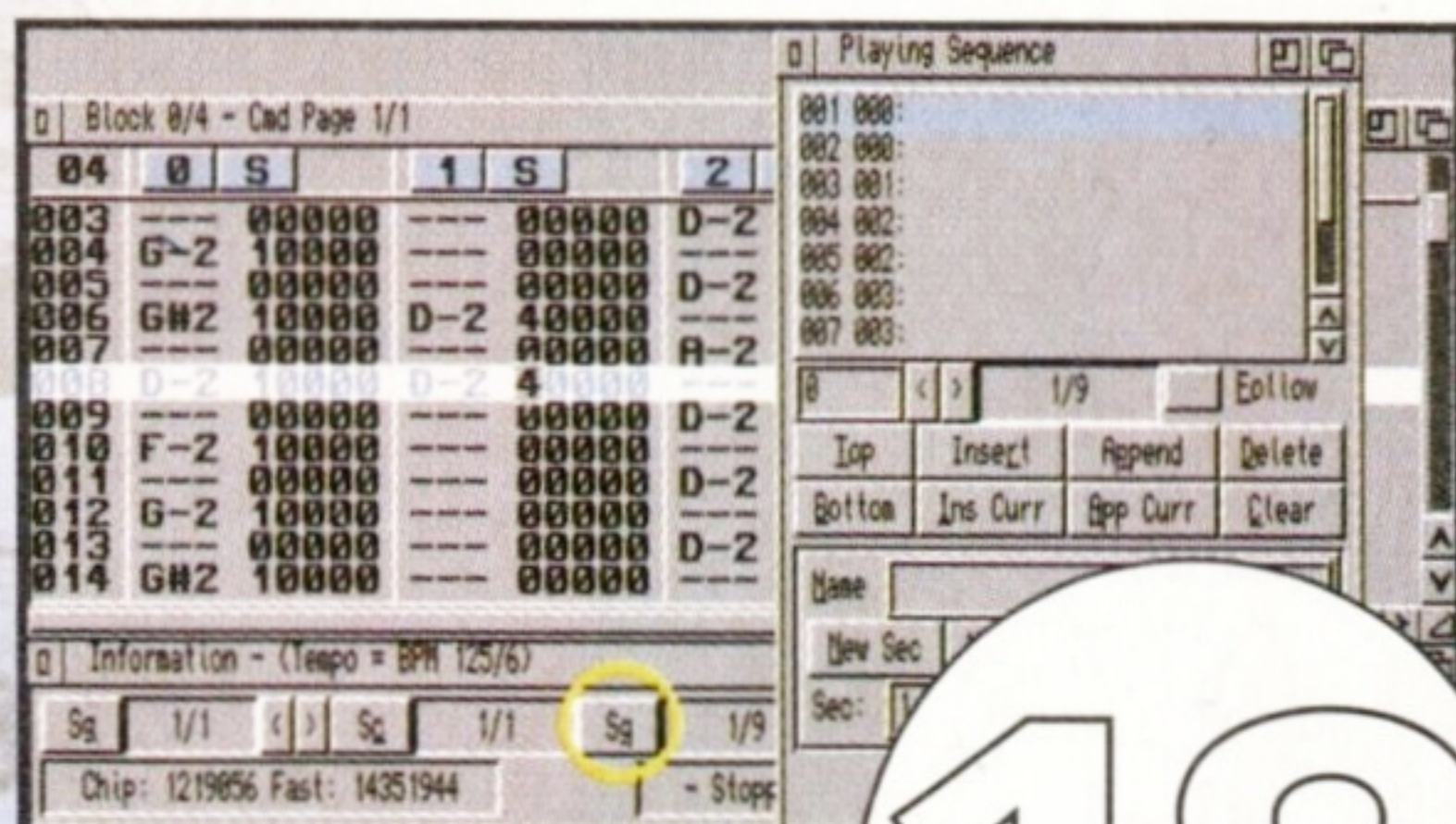
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So, what do you think?



OctaMED



page 18

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AF 26 CPC & MSX EMULATION



Relive those classic eighties gaming moments on your Amiga. **Simon Goodwin** investigates the possibilities of CPC and MSX emulation.

AF SCREENPLAY



Bograts

34 PREVIEWS
What's gonna be topping the charts in '97?

34 BOGRATS
Guide junior to safety in this puzzling platform adventure.



Chaos Engine 2

38 CHAOS ENGINE 2
Do battle with the computer or your mates in this long-awaited sequel.



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42 READER GAMES
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46 GAMEBUSTERS
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Coverdisks

OctaMED 6



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p110

Bograts & Gravity Fight



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p108

CD-ROM

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AGA Experience CD guide p106



Coverdisk Instructions p109



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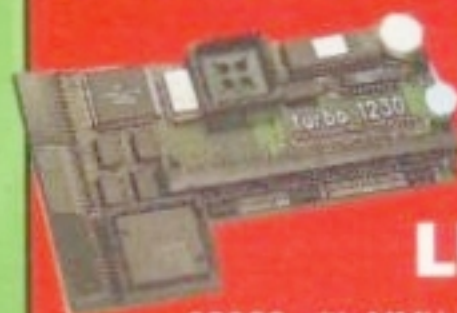
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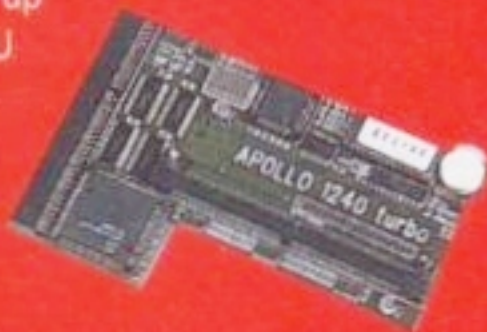
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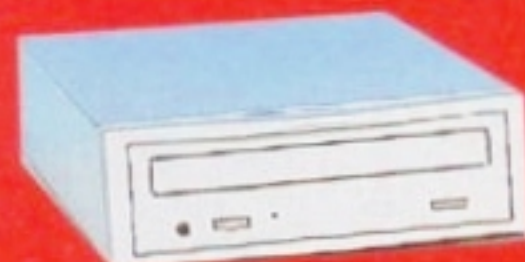
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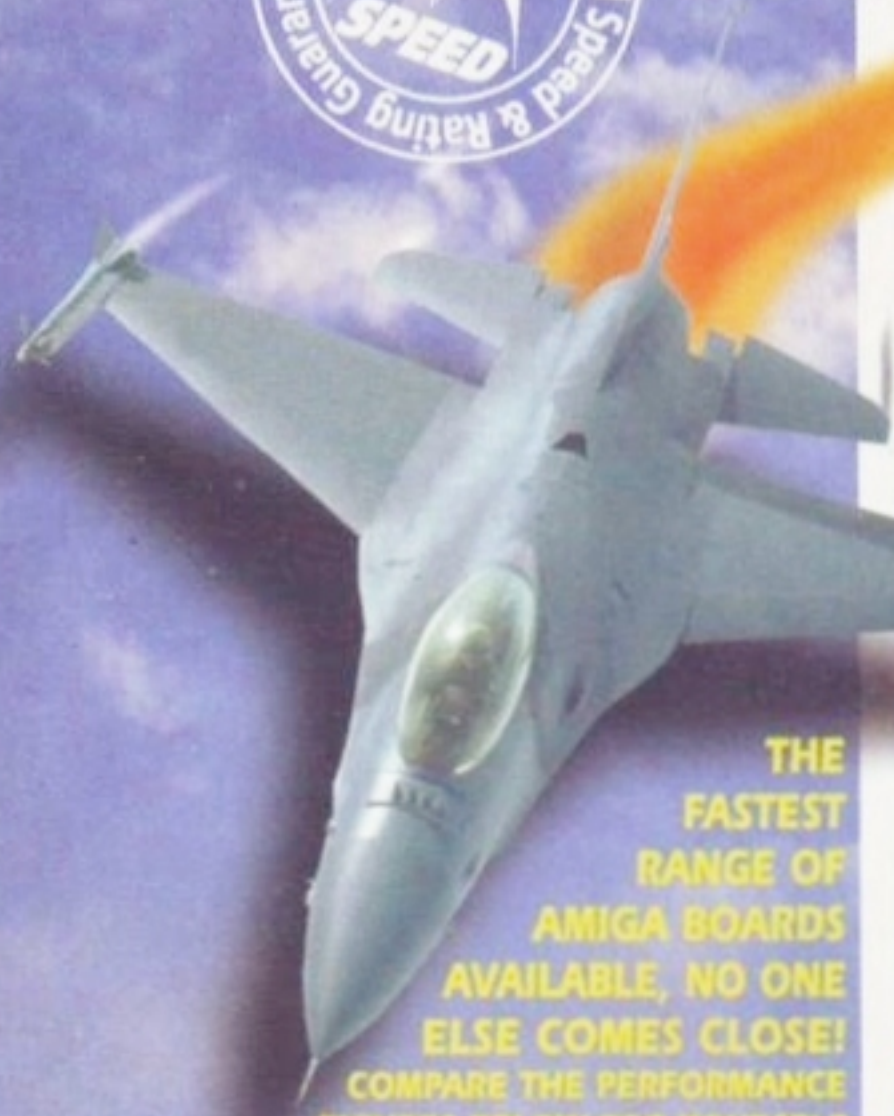
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64-BIT ENGINE A2000/3000/4000 (T Series) 3D Version 24-BIT COLOUR ACCELERATED GRAPHICS CARD.
For all Zorro-III Amigas & Tower System A1200s with Zorro-II backplanes. The core of this great board is the NEW VIRGE GRAPHICS CHIP from S3. With 3D capabilities it's able to process complex 3D functions in hardware (eg. shaded/textured surfaces) with Trilinear Filtering and Shading/Fogging for super realistic Real Time 3D Rendering. When used with CyberGraphX 3D Library, Cybervision 64/3D can even offer a broad range of 3D facilities for any software developer. OPTIONAL EXPANSIONS...

- MPEG Decoder - added to the Feature Connector to provide real time MPEG audio and video decoding at full size custom screens or, in Workbench windows (HQ display using 16/24 Bit modes from CyberGraphX Workbench). Stereo audio output is provided via the supplied dedicated line output jack. Upgrade to a Cybervision 64/3D and MPEG bundle (from previous Cybervision 64) for a SPECIAL LOW PRICE! - Call for full details now!
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1230-IV BLIZZARD 030

1230-IV

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1240 BLIZZARD 040

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A super LOW COST A1200 Turbo Accelerator Board, ideal for housing on any *Tower System A1200 main board (mechanical dimensions, high power consumption and heat emission require an active cooling cap - we therefore do not recommend fitting to standard A1200's without the appropriate modifications etc.). The "ERC" Processors used on these boards are recycled and vigorously tested 68040 CPUs operating at 40MHz with MMU/FPU - an excellent guaranteed and competitively priced alternative. Available options such as the SCSI-IV Kit and RAM are shared with the Blizzard 1230-IV and 1260.

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0Mb, 32-Bit Fast RAM - Expandable to 128/256Mb **£279.95** Can be expanded to FULL 68060

2040 BLIZZARD 040

2040ERC

A1500/2000 TURBO ACCELERATOR and MMU/FPU - 40MHz 68040
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30MIPS with 60 Nanosecond SIMM fitted

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0Mb, 32-Bit Fast RAM - Expandable to 128Mb **£329.95** Can be expanded to FULL 68060

1260 BLIZZARD 060

1260

A1200 TURBO ACCELERATOR and MMU/FPU - 50MHz 68060
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2060 BLIZZARD 060

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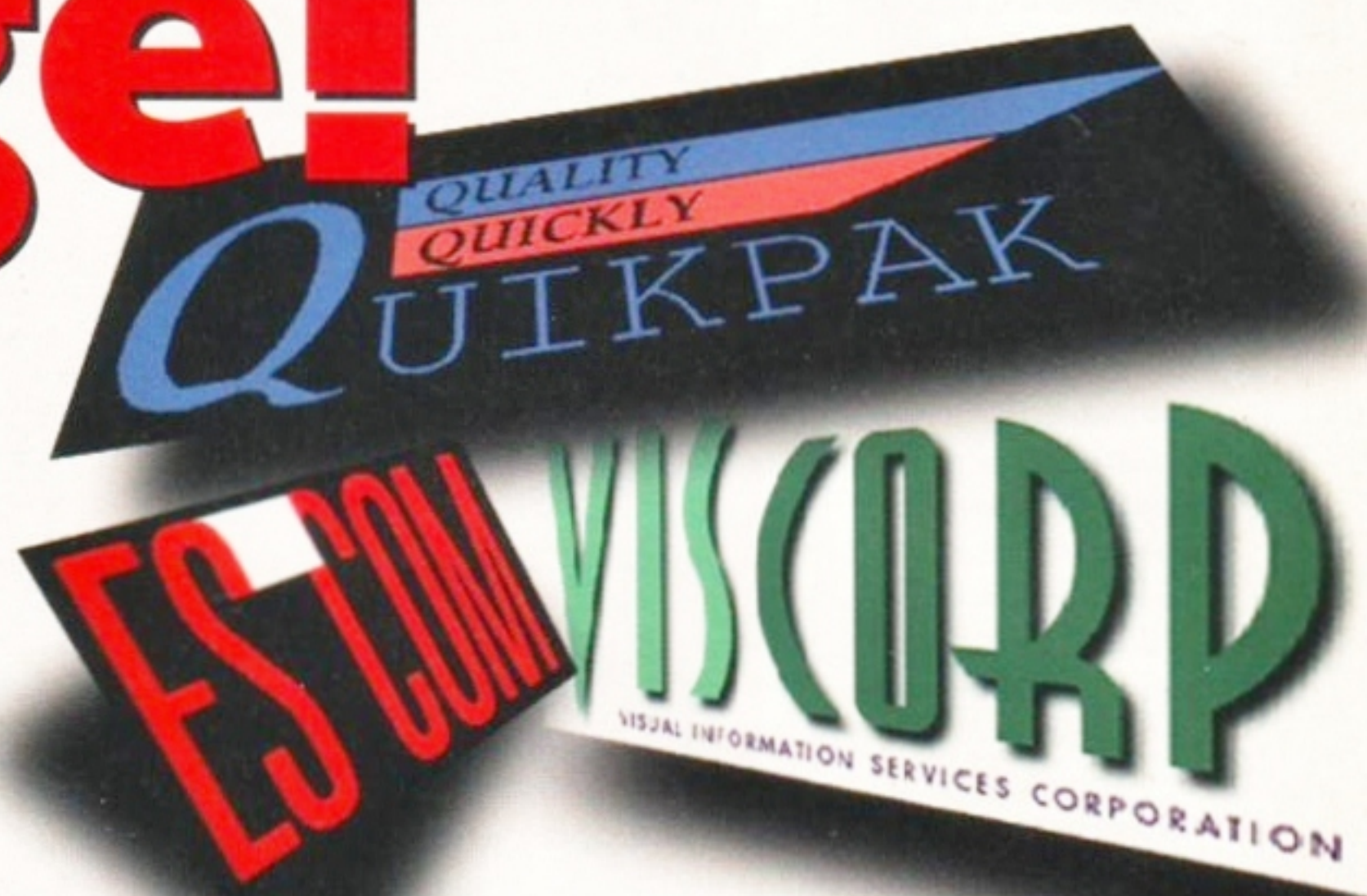
What the Magazines think...
Amiga Shopper 91% STAR BUY "...the Blizzard 1260 is destined to become the ultimate object of desire for A1200 owners."
Amiga Computing 92% BLUE CHIP "...want the fastest Amiga in the World, get this board."
Amiga Format "...Ride on the fastest A1200 in the World..." - 95% GOLD Rating



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RESIGNATIONS AT VISCORP

Two key Amiga experts have resigned from beleaguered Viscorp in recent weeks. First to leave was legendary OS guru Carl Sassenrath, who acrimoniously split from his former employers, basically because he felt they didn't have the best interests of the Amiga or Amiga users at heart.

More recently, Jason Compton, Viscorp's erstwhile press officer resigned from Viscorp saying that he felt that the company wasn't the right place for him after all. Unlike Carl Sassenrath, however, Jason had no nasty tales to tell and complimented various individuals he had worked with. He plans to return to publishing Amiga Report on a more regular basis now that he has more time.



Working for Viscorp is so stressful that Jason attempts to strangle himself!

The uncertainty surrounding just who owns the Amiga may finally draw to a satisfactory conclusion in a matter of days. Surprisingly though, the company most likely to gain the rights, patents and assets of Amiga Technologies isn't Viscorp, but the relatively unknown Canadian computer manufacturers, Quikpak.

After a series of shock revelations in early December, it emerged that Viscorp is almost certainly no longer in the running to buy Amiga Technologies. An article printed by Bloomberg Business News reveals that the contract for Viscorp to buy AT was cancelled in early October. Hugh Jencks, Viscorp's chief operating officer, blamed the problems involved in the deal on Escom's bankruptcy and Viscorp's ignorance of German law in general, but said that he still believed Viscorp to be the "front runners" for acquiring Amiga Technologies.

Dave Robinson, a lawyer involved in the case, said that Viscorp is no longer the leading candidate but could still be in contention if they came up with the cash in time. The whole process has damaged Viscorp's ability to meet other business obligations, but Jerome Greenberg, Viscorp's chairman, stated that they have new plans for increased funding. In short, Greenberg maintains that the contract for Amiga Technologies was allowed to expire because Viscorp did not believe that the assets justified the \$40m price asked for the company.

Meanwhile, Toronto-based Quikpak, who are already the North American distributor for Amiga Technologies and the manufacturers of the A4000T, are hoping to close a deal to buy Amiga Technologies by Friday 13th December.

In a startling display of the enthusiasm the Amiga industry has been missing for some time,

Quikpak have already designed two new machines based on the Amiga 4000T, ready for production as soon as the deal has been worked out. The first is aimed at the North American video market and is called the 4060L, a portable Amiga designed principally for use with the Video Toaster and Flyer, Newtek's respected Studio-on-a-card and non-linear video editor. The 4060L, first reports suggest, has a built-in LCD panel monitor to make it the ideal solution for outside broadcasts.

The other machine on the cards, so to speak, is the 5050T. A machine based on the A4000T it comes with not only Zorro III slots as standard, but also PCI slots. This means that 3D fans can add one or more Pentium or DEC Alpha PCI cards to their machine so that it can act as a render farm, while communicating with them via the excellent Siamese System that Quikpak vow to make an integral part of all new Amigas.

As well as satisfying the needs of high-end users, Quikpak also plan on producing an entry-level home use machine, though they weren't prepared to release any details at this stage.

Amiga Format will obviously be bringing you more on this exciting development next month. In the meantime, latest news can be found on our web-site:
<http://www.futurenet.co.uk/computing/amigaformat.html>

"Quikpak have already designed two new machines..."

AF SPEAKS TO QUIKPAK
EXECUTIVE DAN ROBINSON

PAGE 12



MOUSEMATS WITH NO MERCY

No Mercy software, PD dealers extraordinaire, are also on the January sales kick. If you order £8 worth of floppy disks from their collection, they'll bung in a free mousemat for you normally worth £2.99. This offer will run until the 31st of January 1997, so get your skates on and give them a call on 01609 771 596 to place your order.

MICROPROSE CLASSICS RE-RELEASED WITH ACID

Ten classic Microprose games are to be re-released at a special budget price. The re-issued games will be published by Guildhall Leisure under the Acid Software label.

The ten games include some fairly recent releases, including *AF Gold* winning titles such as *UFO Enemy Unknown* and *Sid Meir's Colonization*, both of which are to be re-released at the excellent value price of £14.99.

Five of the games will be available at the lower price point of £9.99, including *Impossible Mission*, *Starlord* and *F117-A*.

For more info, call Guildhall on 01302 890000 or see our special feature next issue, on sale 23rd Jan.

RICOH GO DIGITAL

The RDC-2 is a new, sub £1000 digital camera which boasts an impressive 768x576 digital resolution and 2Mb of internal RAM.

Presently there are few software solutions to use these cameras directly with the Amiga, but we hope to bring you some exciting news on that next issue!

QUIKPAK'S DAN ROBINSON SPEAKS TO AMIGA FORMAT

We spoke to Dan Robinson, the man in charge of all Amiga business at Quikpak about their plans for the future...

AF: What are your intentions towards the Amiga.

DR: To keep it going, build it up, add a new processor.

AF: Which processor?

DR: The DEC Alpha.

AF: Isn't that going to be pricey for the consumer market?

DR: Well, yes, but the high end isn't targetted at that. The machine with the Alpha is going to be a workstation. We will still be doing a low-end machine...

AF: Based around the 68000 series?

DR: Yes, with 030, 040, 060 and when and if Motorola does it, 070, 080 and so on.

AF: And will you have backward compatibility?

DR: Yes, 100%. As long as necessary there will always be a 68000 series parallel processor in the Alpha-based machine.

AF: Are you interested in buying Amiga Tech. as it stands?

DR: Yes, we hope to have the deal closed by next Friday. [13th Dec]

AF: We have been waiting for five months for Viscorp. Why have you waited this long before making a move?

DR: We didn't. We were talking to Viscorp in April and even before then. We tried to work with Viscorp. We corresponded, tried to suggest how we could help, do a joint venture. They never replied.

AF: It would be safe to say that you haven't been very happy with their progress so far?

DR: That would be an understatement. We are one of the major creditors. You know the "legal entanglement" that Mr. Jenck referred to the other day? [in statements Mr. Jenck referred to "legal entanglements" which postponed the sale of Amiga Technologies to Viscorp]. He may well be referring to us, but there's no point in discussing them. We offered them every option to talk to us.

AF: If Quikpak is successful in its bid to buy Amiga Technologies will you license the technology to Viscorp?

DR: Yes, we won't hold a grudge against them... although we might ask for a certified cheque in advance.

AF: Is it too early to be talking about new machines? We understand you have plans for a 4000 with an 060?

DR: Yeah, the 4060L, that's a portable design for the Video Toaster and Flyer. There's also the 5050T. That's a 4000T with Zorro and PCI slots together with Steve Jones' excellent Siamese System. These are interim machines as we work towards porting the OS to the Alpha.

AF: But what about the low end machines? In this country at least, our major market is A1200 owners.

DR: Will we have a low end Amiga? Yes. Will it be the 1200? No. That machine was great four years ago, but it has to be updated. It was a stupid idea for Escom to bring it back out, at a higher price with no modifications.

AF: There are a lot of Amiga developers out there, people like Carl Sassenrath, Heinz Wröbel and so on. Are you calling for their aid?

DR: Absolutely. At the Amigafest in Toronto we invited everyone to give us their suggestions, to tell us how they would build the Amiga.

AF: Are you going to be updating your net activities to take account of the developers with net access?

DR: Sure, next Friday. There's no point jumping the gun.

AF: Tell us a little about Quikpak's core business. Making and selling Amiga 4000T's can't make you the sort of money you need to buy AT.

DR: No. Quikpak's core business has always been making chips, reliability testing, quick term manufacturing and the like. Selling Amigas was never necessary for us to be able to afford to buy Amiga Technologies.

AF: It looks like we're once again going through a very "interesting" period in the Amiga's history...

DR: Hopefully a short one this time!

Net Corner

Every month Net Corner will keep you up to date with all the Internet happenings and great new Amiga related sites to visit. If you have any recommendations for us, why not send us an email? Just put "NetCorner" in the subject line and email your thoughts to amformat@futurenet.co.uk

OPUS UPDATES AND SDK

If you want to find out about the latest version of Directory OPus, or indeed, download some of the extra goodies available for it (such as the software developers toolkit), then you should probably check out the Opus home page at: <http://agnus.livewire.com.au/gpsoft/>. You can also read the definitive AF

review of the software on our updated website at: <http://www.futurenet.co.uk/computing/amigaformat.html>

LIFE ON MARS?

Well, whether there is something there or not, the Americans are off. The Mars Pathfinder mission began on December the 4th, and with it came unprecedented up to date mission information from NASA. Within hours there were diagrams of the Pathfinder's route, readouts of the vital telemetry



signals at various points and even an astronomer's spotters guide to aid those of us with telescopes or large observatories to track the space vehicle on its two year journey to Mars. You can even see the official maps of the landing site.

Of course the NASA web site is filled with all sorts of other bits and pieces relating to everything from early Gemini missions through to the present day - it's well worth a visit.

CLOANTO MAKE THEIR PRESENCE FELT

This Italian software developer have always been known for their stylish and impressive software (and we'll be reviewing their latest release, *PPaint 7*, next

month). Now they have a stylish and impressive website to match. At the time of going to press it was still very much under construction, but terribly tremendous nevertheless. Check it out at: <http://www.cloanto.com/amiga/index.html>

BOING LOGOS GOING FREE!

Intangible Assets manufacturing are probably best known for their *Envoy* networking software, but they also produce a wide range of other software, and just at the moment they have a special offer going! While having a bit of a clearout, they discovered a large number of the original metallic Amiga Boing logos. While stocks last they are giving them away with every order, so

Louderspeakers

RSD Connections has just announced a set of professional full range speakers called the Essential Pro Speakers. They have a PMPO (Peak Music Power Output) rating of 180 watts and produce very high sound quality thanks to the 4" woofer and 2" tweeter that goes into each speaker.



controls along with a source select switch to let you connect more than one source to the speakers – ideal for telephone conferencing since the Essential Pro speakers are also equipped with a telephone jack input.

The Essential Pro Speakers (model number ES-180) should be available from your local computer dealer or from Special Reserve who can be contacted on 01279 600204. They cost just £59.95.

To ensure you have full control over the speakers you've got bass and treble

January Sale at EMC

EMComputergraphic, creators of the *Format* Gold-winning range of Phase CDs, are having a January sale. They are offering their outstanding CDs at super low prices for one month only. From the on sale date of this magazine you have just four weeks to ring up EMComputergraphic on 01255 431389 quoting "AF January Sale" to get *Phase 1, 2 or 3* at a price of just £14.99 each, *Phase 4* at only £24.99 and *Index* for a mere £9.99 or free with any three CDs. If you were to buy all these CDs at full retail price you would have to pay about £130, but our exclusive deal with EMC means that *Amiga Format* readers only can get all five CDs for less than £70. Remember, these prices exclude post and packing.

"This month we have managed to secure for you one of the most popular CD-ROMs ever..."

AGA EXPERIENCE GUIDE PAGE 106



The Bradford Column



There's something about owning a 'real' arcade machine which appeals to me. A few years ago I had three, and a pinball table, and lately I've been getting the pangs again and started making enquiries about getting hold of another pinball machine (one that works) and arcade cabinet.

During the course of one telephone conversation to a man in the trade, he asked me if I knew the whereabouts of an original Pac Man cabinet: apparently they are much in demand now, not by arcade owners but by collectors. Not casual collectors like me, but 'real' collectors who buy them as investments. So, if you know of any original Pac Man cabinets kicking around, you could make yourself a few bob.

All of which brings me to REPLAY – THE GREAT GAMER EXHIBITION, which is running at the Museum of the Moving Image on London's South Bank until May 1997. All those old computers and consoles from the industry's early days, running original software.

You never know, if you look after your Amiga today it could repay your loyalty in spades

Although there were plenty of examples made, so many have been junked that certain machines are now worth more than they originally cost: Vectrex, for example. Collectors are starting to realise that old computers and consoles, together with a collection of original software, are worth bedding down and keeping for a rainy day.

So, what have you got to do with your Amiga to make the audience of Antiques Road Show 2025 gasp when Hugh Scully's grandson gives a valuation? Keep it in good working condition, obviously and retain the original packaging (sorry if this advice is a bit late for some of you but it's of paramount importance).

Don't be tempted to sell your software and keep as much associated peripheral items as you can – a collection of the world's best-selling Amiga magazine should do nicely.

You never know, if you look after your Amiga today it could repay your loyalty in spades one day. Now where did I put the box for my A1000... Oh yes, I gave it to the bloke who bought the machine after I upgraded to an A2000 – Doh!

Dale Bradford is an avid collector of all sorts of things, but sadly there isn't yet a market for empty cigarette packets, interesting bruises or fantastic excuses. This may explain why we remind you that any opinions expressed here are entirely his own, not necessarily those of Amiga Format.

Welcome Bughunter!!

Here you'll find all you need to get you armed, dangerous, and combat ready for your journey through "The Killing Grounds".

You may enter the following areas, but keep your guard up, and your plasma rifle warm.



Visit this unofficial site for guides, tips, tricks and background info on AB3D II.

why not browse their web-site and see if there is anything you fancy?
<http://www.iam.com/amiga/>

GAMES GALORE

Apex systems, who produced the rather tremendous 6-tris which appeared on a previous Coverdisk, now have a web site containing lots of information about

the games they have developed, and ones planned for the future. Not all their software is currently downloadable from this site, but it soon will be, so pop along and give these people some support.
<http://www.warwick.ac.uk/~csuaw/>

ALIEN BREED

Now that our tutorials

on creating your own levels for Team17's Alien Breed 3D II – *The Killing Grounds* have ended, you might like to check out what's going on at the unofficial support site. The site has plenty of background info, playing guides, tricks, tips, levels and other resources. Find it at:
<http://www.thenet.co.uk/~obiwan/breed/tkg.html>

Ooh you Ruffian!



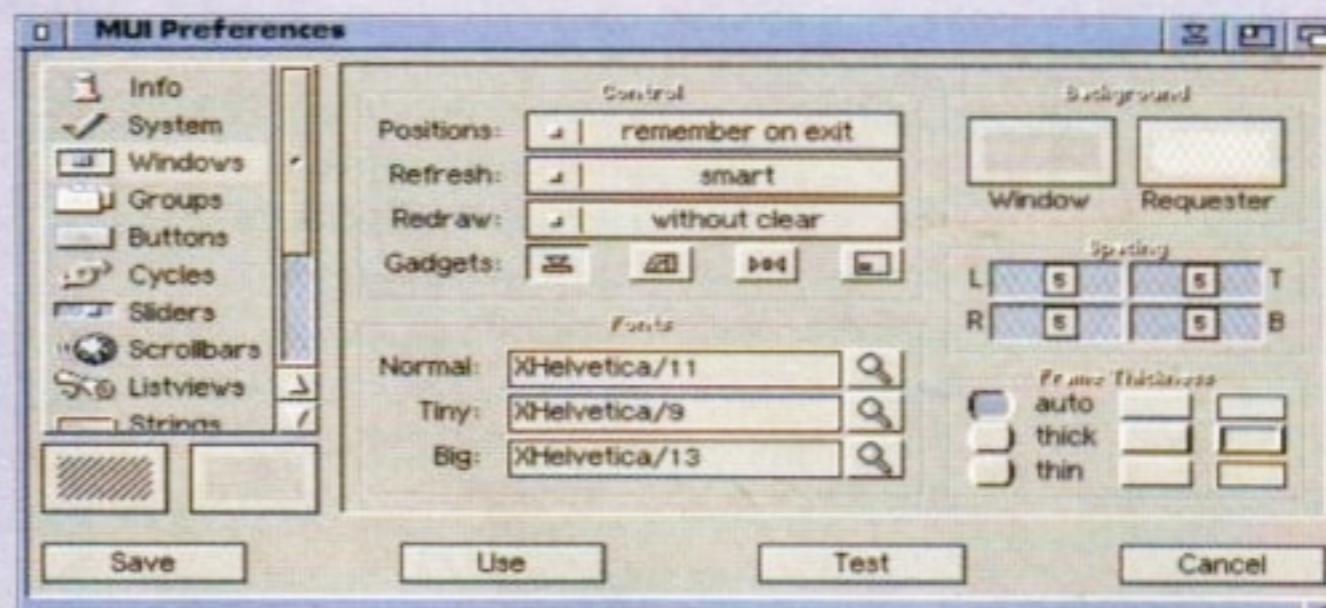
Ruffian Software are finally releasing their eponymously titled jungle platformer onto an unsuspecting public. You might remember the title, we reviewed it back in issue 71 (May 95), where Steve Bradley was unimpressed by the central character's habit of baring his rear to the world, a trend that ClickBOOM's Demona seems only too keen to follow up. He also felt that the method required to despatch the various enemies (spitting) didn't encourage "nice" behaviour in young'uns. Still, you can find out for yourself by asking your local shop for the game which retails at a mere £14.99.

ACL PDQ VFM

Continuing our series of acronymic headlines we give you ACL's new accelerator board for the A1200. The A1200xl ships in the usual bewildering variety of configurations, but all are priced very reasonably with the 40MHz board (sans FPU or memory) retailing for just £159.99.

The fully PCMCIA-compatible board is well equipped with two SIMM sockets offering expansion possibilities up to 64Mb of RAM and a battery-backed clock. There is also an optional SCSI module called SCSIxl. This, combined with the aggressive pricing, the 18 months warranty and the promised technical support web site and BBS must mean Amiga users are once again onto a winner. For further details contact ACL on 01933 650677.

Amiga Format's Top 10 Reasons to... use MUI



Go on. Get it just for Stefan.

- 1** MUI looks great.
- 2** A lot of really good software requires MUI, particularly Internet software.
- 3** If you're a programmer, MUI makes it easier for you to create a program with a nice user interface.
- 4** MUI increases your productivity with drag and drop, pop-up menus, rearrangeable listviews, appicons and appwindows. This makes it easier to do what you want rather than forcing you to work in a particular way.
- 5** MUI is made by the SASG group which means that it is easy to register, easy to upgrade and shares the same kind of look as the rest of the SASG group's software which includes *MagicWB*.
- 6** MUI introduced groovy features like pop-up menus and tabs before any other Amiga software.
- 7** All MUI software shares similar features such as the ability to run on named public screens, iconification, user-editable preferences for look and feel. This reduces the learning curve when you get a new piece of MUI-based software.
- 8** It's a good way to prove to recalcitrant friends that they need to get more RAM, a hard drive and a faster processor.
- 9** It's also a great way to make Mac and PC owners, restricted in how their programs look, jealous.
- 10** Stefan Stuntz needs the money.

Amiga First!

Amiga Format is the first UK Amiga magazine to give away two cover CDs at once. The January CD issue of *Amiga Format* has it's usual CD of course, packed with the latest in PD, demos, animations, utilities, and most importantly, submissions from readers, but it also features a special bonus CD - the AGA Experience Volume 1.

The AGA Experience CD is a commercial product which was released a little over a year

ago. Featuring a huge number of demos, pictures, games, and utilities it is the ultimate disk for AGA Amiga owners. But perhaps the most surprising thing is that this double CD version still costs only £5.50 - much less than any other Amiga mag with even a single CD.

"We want to encourage Amiga owners to embrace CD technology" commented *Amiga Format's* editor, Nick Veitch. "Users who buy the CD version of the magazine have obviously invested money in a CD-Drive and are committed to their machines. We don't see the need to ruthlessly extort money from these people, we want to deliver the best magazine for them at the best possible price.

"Of course, we do incur extra costs mastering and duplicating an extra CD, so I can't rule out the possibility that we may have to raise the cover price the next time we have two CDs, but it's something we'll strive to avoid."

No punishment for Effigy



Capital Punishment, the game we gave 90 per cent and a *Format Gold* to back in Issue 90, has hit problems with UK distribution. Effigy Software, the company named by ClickBOOM in their literature as the

UK source for the game, have released a statement explaining why they decided not to distribute the game after all. Unfortunately, it seems that quite a lot of people have been having problems getting the game to run and Effigy weren't happy about the numbers of people complaining and so declined to sell the title. Ian Jenkins of Effigy assures us that he will endeavour to assist the people who phone in any way he can but that they will not be handling sales and distribution of *Capital Punishment* in this country. You can contact clickBOOM in Canada at the following address:

Pxl Computers, ClickBOOM, 1270 Finch Avenue West, Unit 13 M3J 2G4, Toronto, Canada



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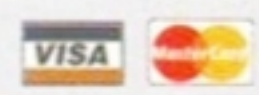
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Show of Strength

SHOW REPORT

Amiga Format has the best readers!

Wow! What a show. I've been going to Cologne since 1989 and it still surprises me that such a great show can take place within a day's travel for anyone in Europe and yet, it is mainly visited by Germans. Just think what you missed – complete CD-ROM writing solutions including Amiga software for less than £400, pressure-sensitive graphics tablets from Wacom for only £150, 30-bit colour SCSI A4 flatbed scanners for less than £300 and ridiculously low SIMM prices, not to mention new hardware and software being ably demonstrated by its designers and authors for a solid three days of throat-numbing customer help.

With more than 45,000 people attending the show, the noise, as you might imagine, was deafening. Stands were competing with one another for people's attention and events like the free climbing contest shouted for your participation in what looked to me like a seriously foolhardy way to spend your time. If you liked competitions, you could have won a Porsche Boxster or a race in a Formula One car along with umpty-ump lesser prizes like copies of the latest games and hardware. While this show is nominally all formats and there were plenty of stands showing off PlayStation games, PC hardware and software and other miscellaneous items unrelated to the Amiga (including, bizarrely enough, a stand for Encyclopaedia Britannica), I would say that 80 per cent of the attendees were the Amiga faithful, sauntering out of the hall with monitors, scanners and bundles of software for their machines.

Of the stands that were Amiga-related, Phase 5 probably had the largest. It was a single stage affair with forbidding black walls surrounding a bar for VIPs. Arrayed around the outside walls were a variety of machines, the relativistic effects in the area proving that they were all going faster than man was meant to travel. Amiga Oberland also had a very large stand, selling hundreds of copies of Germany's premier raytracing program. No, not *Lightwave*, not *Imagine*, not even *Cinema 4D*, but *Reflections*. With an installed user-base of more than 70,000 registered users, *Reflections* is probably the most popular raytracing package in the world. Amiga Oberland also sold out of CyberStorm II '040 and '060 boards on the first day of the show.

On the other side of Phase 5 was the ProDAD stand, also an enormous affair, where harried staff were busy explaining the benefits of ProDAD's superb video-related software, their replacement for Workbench called P-OS which was getting its first public airing, Cocktel a video conferencing system and QuickArray, a kind of RAID system which mounts two extremely fast AV SCSI drives as one even faster single unit.

Continuing the roster of famous German Amiga "names", Stefan Ossowski's Schatztruhe (Schatztruhe means treasure chest in German) were swamped on a continuous basis with people four deep around the stand all clamouring for a word with John Potter (the author of *Directory Opus* and obviously something of a celebrity in Germany since people were asking him to autograph their copies of *DOpus*), Jason Compton, now ex-Viscorp but not at the time, Michael Battilana of Cloanto, Urban Müller, Swiss supremo of Aminet and Angela Schmidt and Heinz Wröbel, both long-term Amiga developers involved with

"I would say that 80 per cent of the attendees were the Amiga faithful."

AT but who are much better known in their native Germany than over here. Other celebrities spotted at the show included Dr. Peter Kittel sharing the VillageTronic stand as a representative of Pios. He was demonstrating the BeBox, the machine that some people say is the new embodiment of the Amiga spirit, but is, at the moment, without any substantial software base, unless you run MacOS on it and then, of course, you miss out on the Amiga-like features in BeOS.

The British contingent at the show consisted of Jeremy Rihl from Digita, David Link and Richard Kiernan from HiSoft, Tony Ianiri from Power Computing and the whole Gasteiner team, among others.

All in all, the show, while smaller than some previously, was a great success and everyone came away from it vowing to return next year. Even though the name of the show has been changed from World of Commodore to Computer '96, there's no doubt that this show is the biggest and best in the world. ☺

"All in all, the show was a great success and everyone came away vowing to return next year."



Oi! Turn around so I can take a picture of your happy, smiling faces, you Amiga fans.



With about 45,000 visitors most of your time spent at Computer'96 will involve saying "Excuse me."

"Grabbing an A3 pad I began to sketch. This is an organisationally wise move because from there you can pluck out the best bits."

DRAWING A WAGE PAGE 88



OctaMED

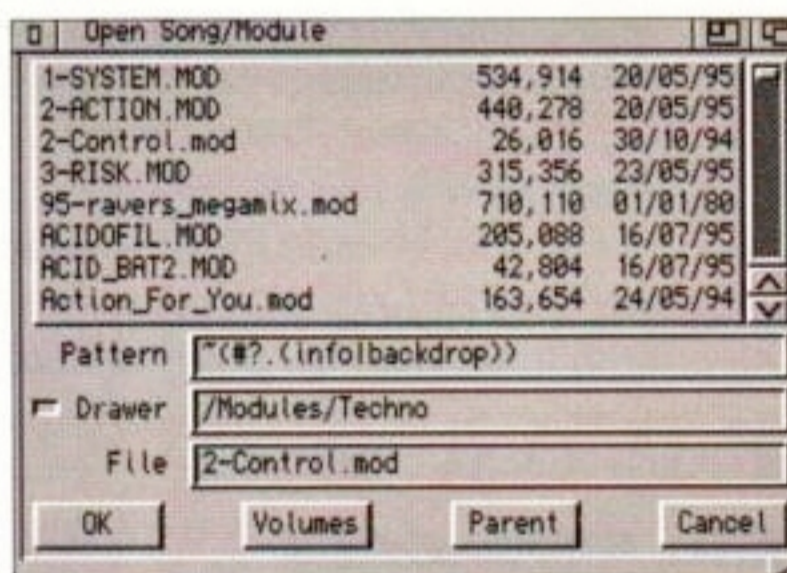


Amiga Format are proud to be bringing you a full version of the superb **OctaMED 6**. Now discover how to make the most of it...

How it works

LOADING A TUNE

The easiest way to see and hear *OctaMED* in action is to load one of the demonstration tunes you'll find on the Coverdisk. Use the Project menu option Open to select the tune. These are the so called "mod" files (short for "module") which contain both the samples which make up the song, and the construction details of the song itself.



Load a complete song from the Coverdisk. This will load the Song and the samples.

Once the song is loaded, you can use the Song Play button in the Main Control window, in the top left of the display, to start it playing. You'll notice the four track displays start to scroll up the screen. When the numbers in the tracks cross the highlighted bar in the centre of the display, the note or special event at that point is triggered. Think of it like an old piano roll machine,

"OctaMED has grown into one of the most powerful music composition tools around."

with the scrolling numbers equivalent to holes punched in a paper tape or a nail on a revolving drum.

If you don't hear anything, you should check that your Amiga's audio connections are hooked up properly.

You'll need to connect the Amiga's audio outputs to a monitor's audio inputs, or some other form of external amplifier and speaker system. You may use small battery-powered speakers for example, or connect your Amiga to your Hi-Fi.

You can pause or stop the song by clicking on the Stop button. Clicking on Cont will continue playback from



Use Play song to replay the complete song, and Block play to replay only the currently displayed Tracks

where you stopped it. When you've listened to as much as you can stand, select New from the Project menu to clear out all the existing samples and we'll see how to start using *OctaMED* to make some music for ourselves.

LOADING A SAMPLE

The most important part of an *OctaMED* song is the instrument. Without an instrument, there is no sound. Octamed does not have any default sounds built-in: you must create or load an instrument (either on it's own or as part of a song) to be able to hear anything.

Let's create an instrument in the simplest possible way - by loading in a sample. Click on the little folder icon in

the Main Control window beside the number one. At the moment the box beside the folder icon will be empty,

as there is no sample loaded. When the file requester appears, select a sample - from the Coverdisk (or CD) - and load it. You'll see the name appear next to the number 1, and another number (the sample length) on the far right.

Introduction: Sound Trackers and OctaMED

When the Amiga first appeared, it offered something which no other computer could do: the ability to replay real sounds or "samples". It wasn't long before the first musical composition tools appeared, and these were known as "Sound Trackers". They presented the different notes in four vertical columns or tracks. These tracks scrolled up the screen, triggering the relevant sample as they passed by. Sound Trackers were extremely easy to use, and instantly proved a huge hit with anyone interested in making music.

Sound Trackers have traditionally always offered the ability to play up to four sounds at once: a limitation imposed by the Amiga's sound hardware. *OctaMED* broke through this four channel limit by means of cunning programming. *OctaMED* can actually replay up to eight samples at once, albeit at a slightly reduced quality. This makes it possible to create tunes of surprising complexity.

OctaMED has grown into one of the most powerful music composition tools around, and *Amiga Format* is proud to be able to bring you a full copy of version six. This is the last of the *OctaMED* series: after this, *OctaMED* is transformed into a new product called "Soundstudio".

Using the numeric keypad

The numeric keypad is the cluster of 18 keys to the right of the main keyboard (Sorry A600 owners - you don't have one!) and *OctaMED* uses it as a quick way of selecting and altering instruments.

- Keys 1 - 9 Select instruments 1 - 9
- Key 0 Select instrument 10
- Key / Select last used instrument
- Key . Change the first instrument digit (e.g. 05 -> 15, 15 -> 05)
- Key +/- Next / previous instrument
- Key (/) Decrease / increase current instrument's volume by one
- Key * Pick instrument number nearest the cursor

Key Enter
After pressing Enter, press key A - V to select the corresponding instrument

SPECIAL NUMERIC KEYPAD SHORTCUTS

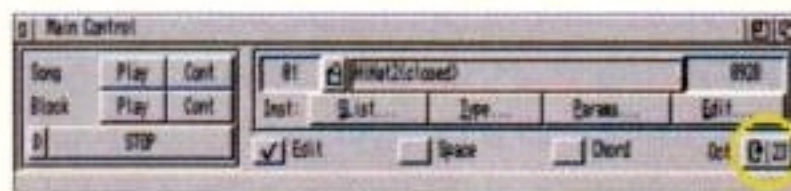
- Ctrl-4 Decrease current playseq entry
- Ctrl-6 Increase current playseq entry
- Ctrl-5 Insert current block to playseq
- Ctrl-0 Duplicate current playseq entry
- Ctrl-. Delete current playseq entry
- Ctrl-8 Scroll playseq up
- Ctrl-2 Scroll playseq down
- Ctrl-7 Top of playseq
- Ctrl-1 Bottom of playseq

You can load as many samples as you have memory to store. To load a sample into the number two slot, use the Numeric keypad to select the sample number (press 2 to go to the number two slot, and press 1 to return to the number one slot). The sample selected in this way is also the one which will be played.

PLAYING A SAMPLE

Now you can play the sample. *OctaMED* uses the Amiga keyboard as though it

Z	C-1	Y	A-2
Q	C-2	M	A#1
S	C#1	7	A#2
2	C#2	,	C-2
X	D-1	U	B-2
W	D-2	L	C#2
D	D#1	I	C-3
3	D#2	.	D-2
C	E-1	9	C#3
E	E-2	;	D#2
V	F-1	O	D-3
R	F-2	/	E-2
G	F#1	0	D#3
5	F#2	P	E-3
B	G-1	[F-3
T	G-2	=	F#3
H	G#1]	G-3
6	G#2	\	G#3
N	A-1		



Remember you can quickly select which Octave to replay your samples by clicking here or pressing F1 to F4.

were a two octave musical keyboard. It's a bit tricky to describe, but when you start pressing the keys you'll soon get a feel for which key does what. The diagram on the left shows you exactly which keys trigger which notes.

ALTERING OCTAVES

To change the octaves which the keyboard covers, you need to click on the cycle gadget marked OCT in the bottom right of the Main Control window. By default this is set to "12" meaning the first two octaves. It can be changed to "23" or "34" to select different octaves. A shortcut is to use F1 to F4 to quickly skip octaves.

Try playing your sample after selecting a different octave. Some samples sound better when played

"OctaMED uses the Amiga keyboard as though it were a two octave musical keyboard."

higher in pitch, so you will need to remember this option exists. Remember also that you can quickly select different samples using the numeric keypad.

TRACKS, BLOCKS AND SONGS

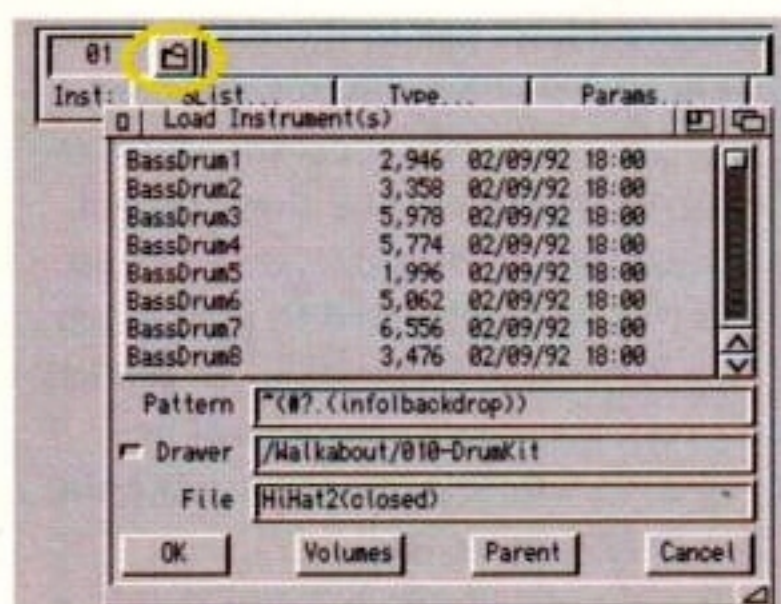
It's also important to grasp the way in which *OctaMED* songs are constructed. The most basic element is the Track: this is one vertical column of numbers

Continued overleaf →

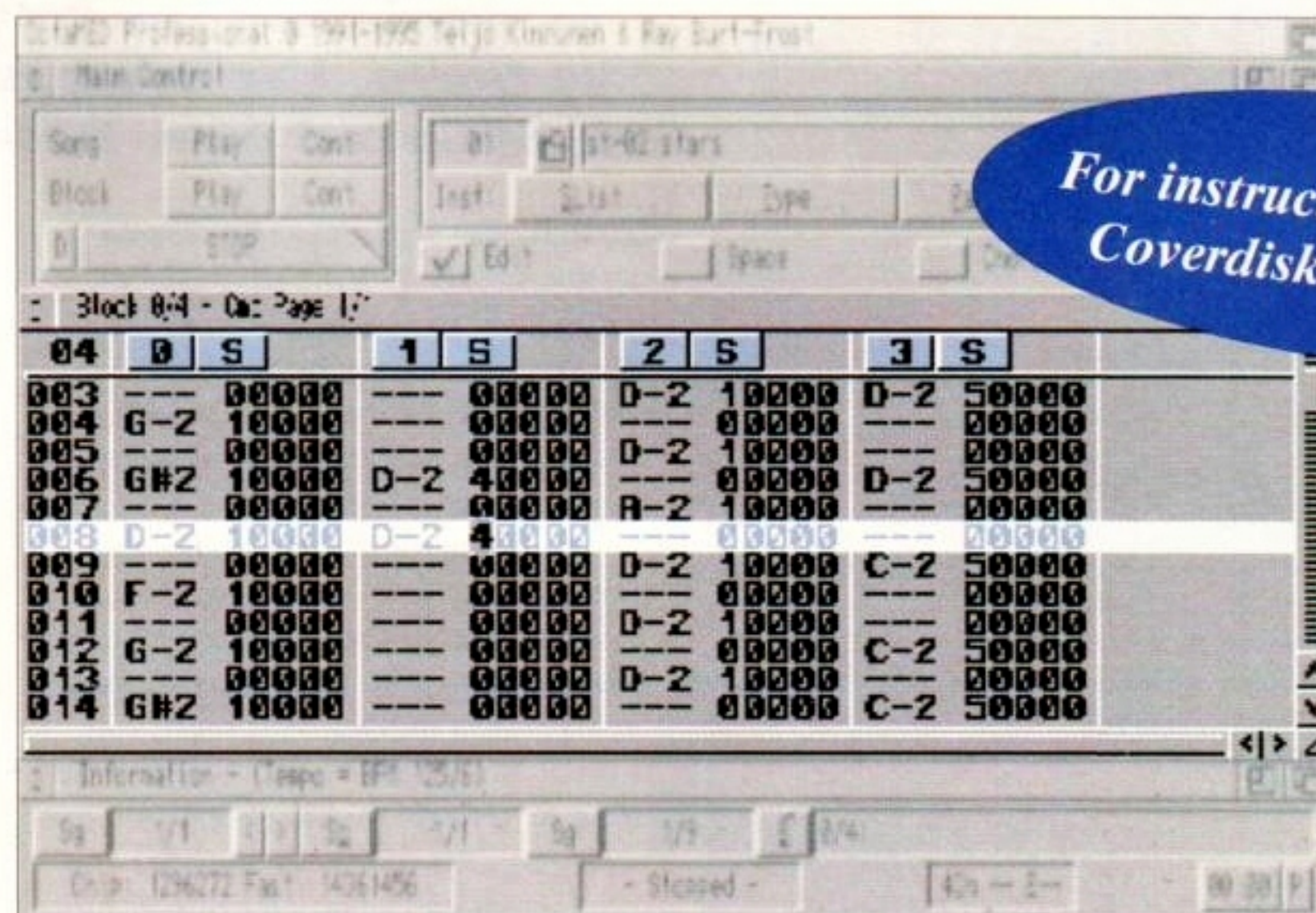
Samples

The Amiga can replay real sounds through its audio hardware, and these sounds are stored as "samples". A sample is nothing more than a collection of numbers, but when the numbers are sent to the Amiga audio hardware, out come real sounds.

Obtaining new samples isn't difficult. The PD libraries and Internet are full of sounds for you to use, and if these aren't enough you can always make your own. To create your own sample you need a little extra hardware in the form of a small box called a "sampler". The sampler connects to the parallel port of the Amiga, and has an input socket for connection to a CD player, microphone or other sound source. The Amiga will use the sampler to convert the sound into a raw sample, which can then be saved to disk for later use.



Click the folder for the Sample load requester.



There are four Tracks here, although *OctaMED* can actually replay eight at once.

For instructions on using your Coverdisk turn to page 110



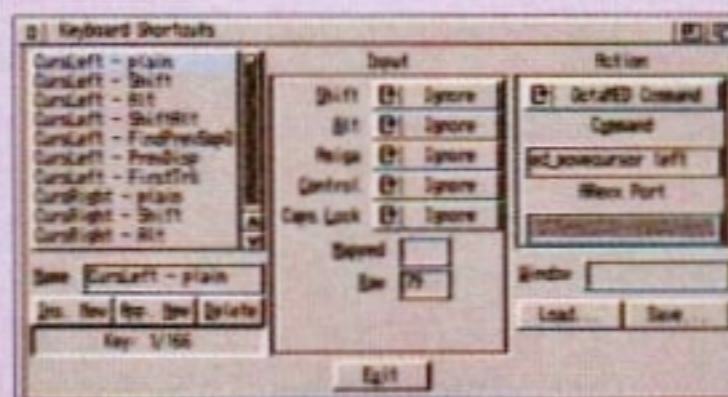
"OctaMED can use its own special synthesised sounds or even drive MIDI instruments."

Shortcuts when editing

Esc	Edit mode on/off
Shift-Esc	Chord mode on/off
-	Space mode on/off
Del	Delete note or command digit under cursor
Shift-Del	Delete note and command digits (on current page)
Alt-Del	Delete only command digits (on current page)
Amiga-Del	Delete note and command digits on all pages
Left Amiga-Del	Delete chord.
When L-Amiga is held down, every time you press Del the note under the cursor is deleted and the cursor moves to the next selected track.	
When L-Amiga is released, the cursor advances (as defined in the Keyboard Options window).	
Return or A	Insert hold symbol (-) Shift-Return
Insert hold symbols to all tracks of the previous chord	
F	Insert / play note at default pitch
Backspace	Delete note and move following notes up
Shift-Backsp	Insert empty note slot Alt-Backspace
Delete current track	
Alt-Shift-Bksp	Insert new track
Amiga-Bksp	Delete line
Sh-Amiga-Bksp	Insert line
Shift- 0 - 9	Enter programmable key 0 - 9
Shift-Ctrl-0-9	Pick note under cursor as programmable key 0 - 9
Tab	Highlight current line
Shift-Tab	Cycle command pages
Ctrl-O	Create volume slide (using command 0C)
Shift-Ctrl-O	Create generic slide (using any command)
Ctrl-T	Create type 1 slide (using command 03)
Shift-Ctrl-T	Create type 2 slide (using commands 01 and 02)
Shift-Alt-Z	Swap block
Shift-Alt-X	Cut block
Shift-Alt-C	Copy block
Shift-Alt-V	Paste block
Ctrl-Z	Erase range
Ctrl-X	Cut range
Ctrl-C	Copy range
Ctrl-V	Paste range
Shift-Ctrl-V	Paste to selected tracks
Ctrl-B	Range current track
Shift-Ctrl-B	Range current block
Ctrl-J	Join block with next
Shift-Ctrl-J	Split block at cursor
Ctrl- <	Swap note under cursor with following note, taking account of the current spacing value
Ctrl- >	Swap notes on adjacent tracks
Ctrl-K	Kill notes to end of track
Shift-Ctrl-K	Kill notes to end of block
Alt-Ctrl-K	Kill notes to end of block and actually remove the deleted part of the block. In other words, the current line becomes the last line of the block.

DIY shortcuts

OctaMED lets you define your own keyboard shortcuts, in case the existing ones aren't enough. From the settings menu, select "Keyboard Shortcuts". You will then need to create space for the new shortcut, name it, define the keys to be used and finally enter the operation you wish performed.



← which scrolls up the screen whilst OctaMED is playing. To start with, there are four Tracks – one for each hardware audio channel. The first and last tracks are sent to the left Amiga sound output, the two middle tracks are sent to the right Amiga sound output.

The length of the Track can be altered, but it defaults to a sensible 64 units long, numbered from 0 to 63. Each of these unit numbers refers to an empty "slot" in the Track, into which a note or some other event can be placed. You can control the rate at which the Track scrolls up the screen by adjusting the Tempo of the Song.

A group of four Tracks, is called a Block. Tracks are always replayed in Blocks. So for example, you might create a drum and snare pattern in the first Track, some bass notes in the second Track and some strings in the Third track. This forms one Block – you can see there is no need to fill all the Tracks which make up a Block.

"At the top of the tree comes the Song. The Song is constructed from Blocks."

Some Blocks might have two Tracks used, some might have all Tracks used. It's entirely up to you. In fact some people make use of the fact that different Tracks are relayed to differed Amiga audio outputs to create special stereo effects.

At the top of the tree comes the Song. The Song is constructed from Blocks. Once you have created all the Blocks you require (which are in turn created from individual Tracks), you arrange them into order to create your Song. When you replay a Song, you are replaying a list of Blocks one after the other. Each Block contains one or more Tracks, and each Track contains the

And there's more...

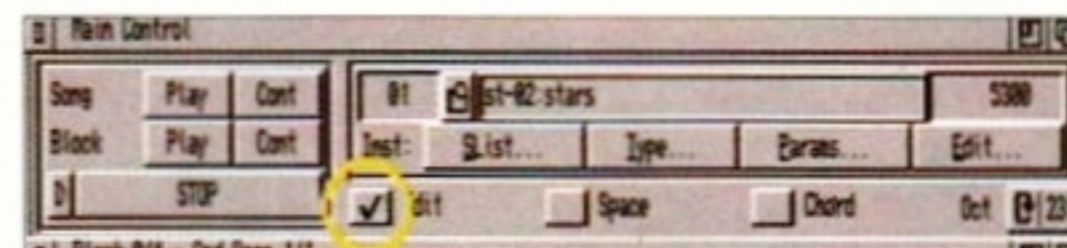
OctaMED can do so much more than we've had time to explain here.

● OctaMED makes it easy to alter the volume of notes, create echo effects, or to slide sounds up and down.

● OctaMED can use instruments other than raw samples (for example, OctaMED can use it's own special synthesised sounds or even drive MIDI instruments).

● As the name suggests, OctaMED can even replay up to eight samples at once. There are also built in facilities for sound sampling (with suitable hardware). There just isn't space here to do anything other than scratch the surface.

For more information, remember that on-line help is only a key-press away: press the HELP button for AmigaGuide instructions. Amiga Format has recently published a tutorial on OctaMED 5, and we plan to do an OctaMED 6 tutorial very soon.



Make sure you have clicked here if you want to add or delete anything from the Tracks.

notes and events which make the sounds. And that's all there is to making an OctaMED Song!

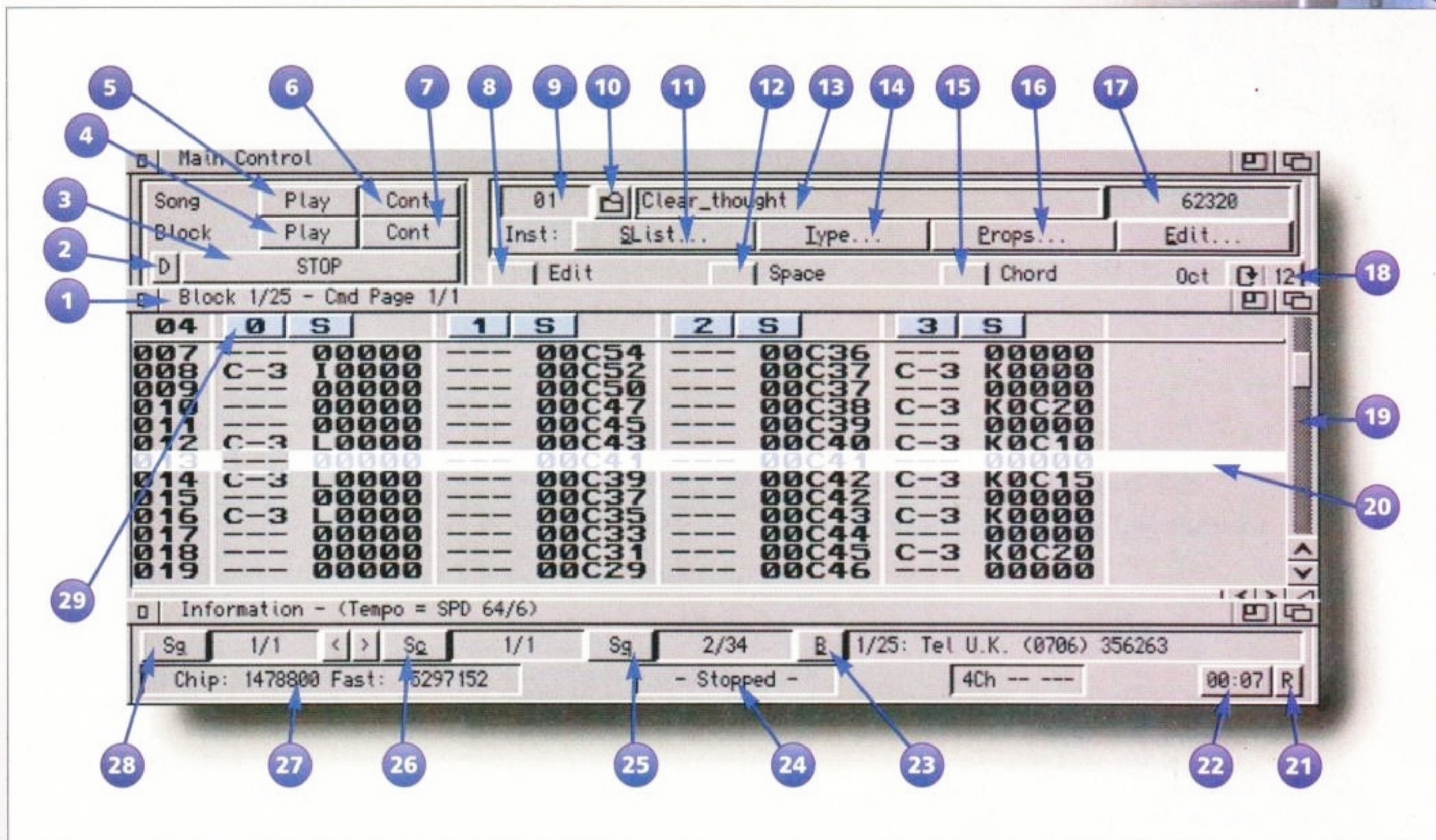
RECORDING IN STEP TIME

There are two ways to record notes into your Tracks: Step time and Real time. Step time lets you use the cursor keys to move up and down the Track and place notes where ever you wish.

For example, you might want to place a Kick drum every four steps, and using Step time editing is the easiest way to achieve this accurately.

Try it now. Load in and select a Drum sample in the same way as before. Now make sure the Edit box in the Main Control window has a tick in it. Only when there is a tick in this box can you alter the contents of the Track. Now click in the Track display, and use the cursor keys to move to the first track. Scroll up and down to the top of the Track, and then place a Drum sample at units 0, 4, 8 and so on. To do this, you only need to press a key on the keyboard. Depending on the key you press, the Drum sample will be replayed in a different key. Pressing the Q key is as good as any!

If you want to overwrite or delete a sample, move the Track display up and



Find your way around...

- | | | | |
|---|--|--|---|
| <p>1. Track Display. Here is where all the tracks (usually four, but more are available) are displayed. They'll scroll up during playback.</p> <p>2. Delayed start. Only start playback when a key is pressed. A good way to make sure you get the first beat in the Track when recording in Real Time.</p> <p>3. Stop playback.</p> <p>4. Start the current Block playing back.</p> <p>5. Start the entire Song playing back, including whatever Blocks are included in the Playing Sequence.</p> | <p>6. Continue Song playback from where it was stopped.</p> <p>7. Continue Block playback from where it was stopped.</p> <p>8. Edit button. Must be on to allow changed to contents of Track.</p> <p>9. Current Sample number (change with Numeric keypad)</p> <p>10. Load a new Sample into the current Sample slot.</p> <p>11. Display the Sample List: a way of organising samples into different types.</p> <p>12. Insert a space after every note.</p> | <p>13. Name of current Instrument.</p> <p>14. Display details on the current Instrument (Sample or MIDI for example)</p> <p>15. Insert a chord (multiple notes at once)</p> <p>16. Adjust the parameters of the current Instrument</p> <p>17. The length of the current sample. The button beneath brings up the Sample Editor.</p> <p>18. Current octave number. Click to adjust.</p> <p>19. Slide bar to move up and down Track list.</p> <p>20. Current item in Track list.</p> | <p>21. Reset elapsed time.</p> <p>22. Elapsed time since song begun.</p> <p>23. Bring up Block List.</p> <p>24. Current status of OctaMED.</p> <p>25. Bring up Playing Sequence (the list of Blocks which make up the Song)</p> <p>26. Bring up the Section window, to allow sections of Songs to be played.</p> <p>27. Currently available memory.</p> <p>28. A list of songs to playback.</p> <p>29. Mute control: use it to temporarily switch off the Tracks individually.</p> |
|---|--|--|---|

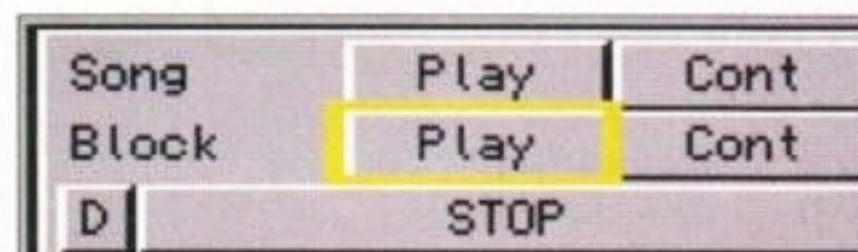
down so that the unit is highlighted again, and either press a different key or the DEL to delete it. You'll notice that every time you enter a note, the Track automatically moves to the next unit.

RECORDING IN REAL TIME

Once you have entered all the Drum sounds, try playing your Track back. Click on the Block Play button in the Master Control window. This will start your Track playing over and over: the Track will scroll up the screen, and the highlighted notes will sound. You'll soon hear any wrong notes.

With the Track still playing, click in the Track list display again, but this time move over to the second Track. If there is a tick still in the Edit box, you can now enter notes in the second track in Real Time. Simply hit a few of the keys on the keyboard, and they'll appear in the Track display. When the track loops around again, they'll be replayed.

This is a very good way to enter notes quickly. You can select the sample to enter, and play it on the keyboard with the other Tracks as a backing. If you make a mistake, you just have to hold down the DEL key to blank out all the notes.



Click here to repeat the Block over and over - perfect for recording notes in real time.

Continued overleaf →



OctaMED and MIDI

MIDI is the "Music Instrument Digital Interface", and it's the standard for connecting musical instruments to each other and to other pieces of equipment such as drum machines and computers. Compatible hardware will have at least one MIDI socket. MIDI allows instruments to send signals which trigger notes: no sound is sent through the MIDI ports, only a special digital code. The code can be generated by an instrument such as a keyboard, or a computer program such as OctaMED.

OctaMED is fully MIDI compatible: although you will need an Amiga MIDI interface, which are available for about £20 from various dealers. The MIDI interface connects to the Amiga's serial port and provides MIDI IN, OUT and THRU connections. To use MIDI, you

need only define a new Instrument. Instead of making the Instrument a Sample, define it to be a MIDI voice. It can then be used like any other instrument.

Using MIDI means that OctaMED is no longer limited to the Amiga's audio output capabilities: you can supplement the four or eight tracks of Amiga sound with up to sixteen channels of MIDI instruments. MIDI code are stored in tracks in exactly the same way as normal OctaMED tracks: the only difference is that the instrument is set up to be a MIDI part rather than an audio sample. MIDI instruments cost from about £100, and if you are interested in computer music you should investigate them perhaps by reading sister mag "Future Music".

"A Top Forty hit is virtually guaranteed!"

← BLOCK AND SONG EDITING

Let's assume that you have finished recording your Tracks, and so have a Block which is more or less finished. Let's assume it forms the introduction to your soon-to-be-completed Song.

Now you need to go to the pull down menus at the top of the screen, and find the menu entitled Block. You'll see an option called New>> which has several options. Stick to Append for now. This creates a brand new Block for you to play with.

To select which Block you are currently editing, open the Block list by

clicking on the B in the Information window at the bottom of the screen. A keyboard shortcut is to press left ALT and B. From this window you can pick the Block to work with.

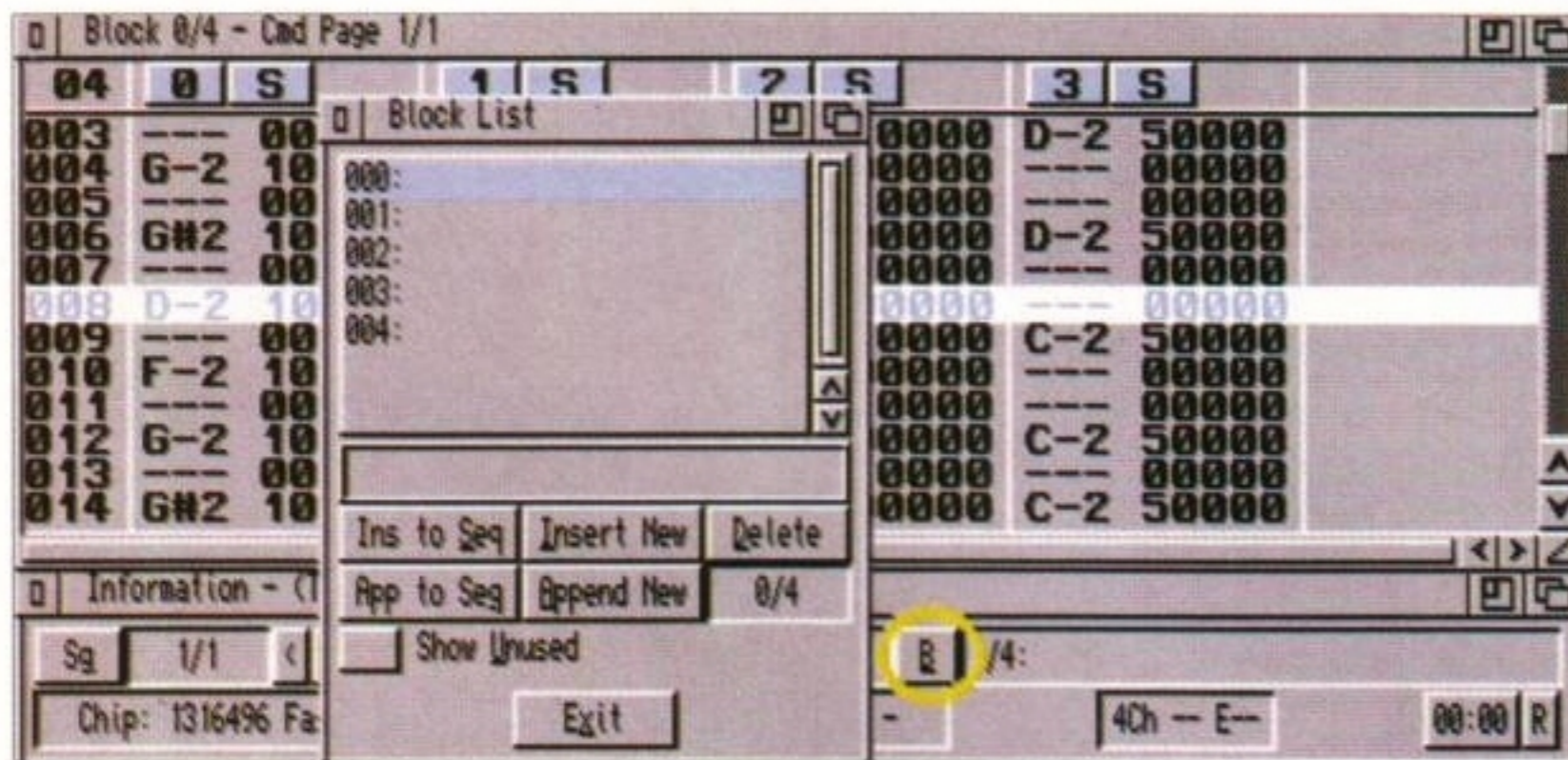
If you want to use some of the previously defined Tracks in this new Block, you can Cut, Copy and Paste them. Use the Track menu to select the Track you want to copy, and then move to the required Block and Track to paste it down. When you paste down a Track, you'll delete whatever was already stored there, so be careful.

To create a Song, you only need to create a list of Blocks to play. To do this,

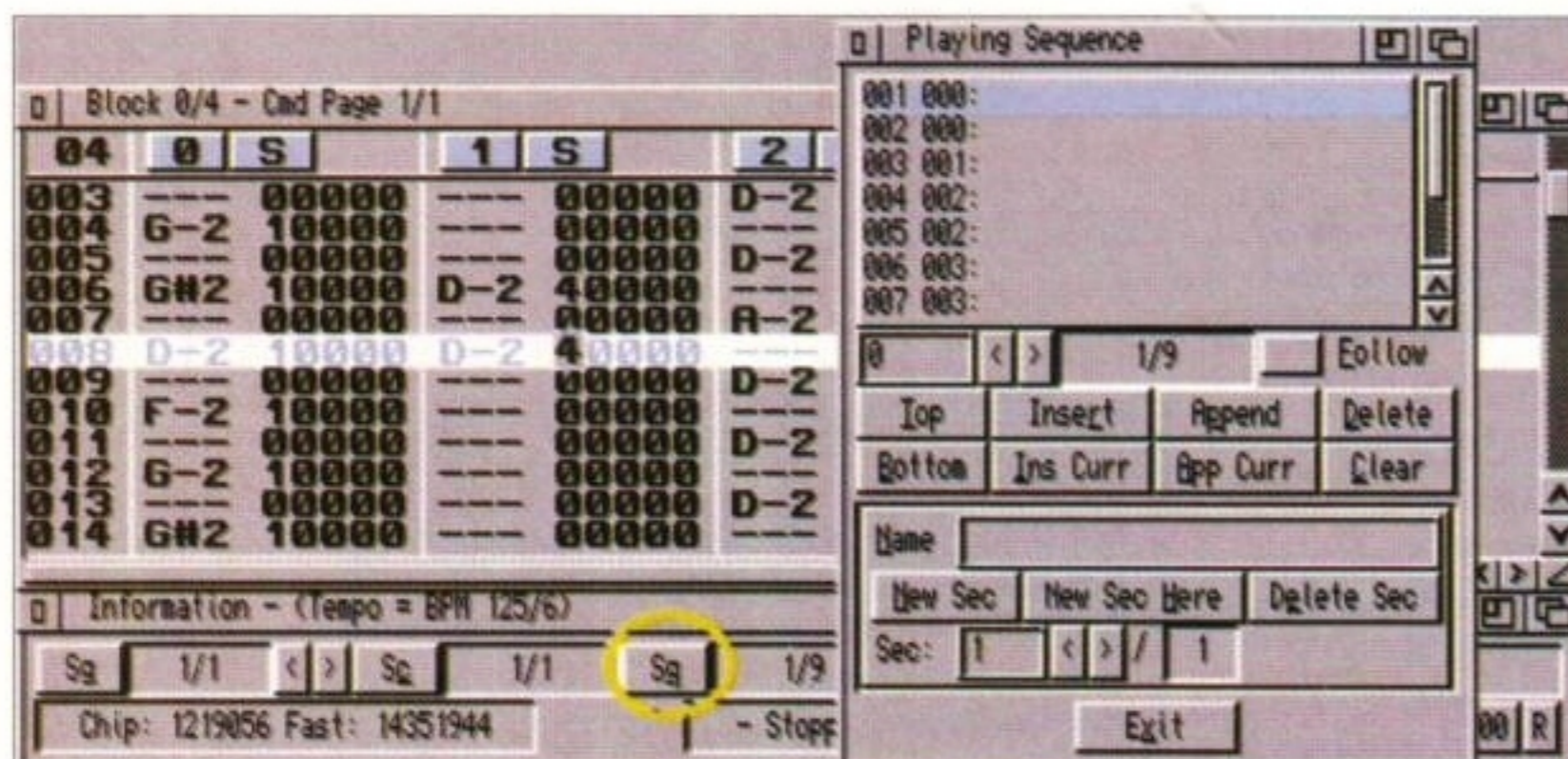
open the Playing Sequence window. To do this click on the Sq button, or press left Alt and Q. Using the Insert button you can add items to the playback list, and so create your Song. A Top Forty hit is virtually guaranteed!

THIS IS THE END...

The best way to learn what you can do with OctaMED is to have a jolly good play around. There are plenty of Mod files on Aminet - why not download some and see how they were put together. But we will be having more tutorials to help you along!



The Block List display will let you move from Block to Block. A bit like Spiderman in fact.



The Playing Sequence is a list of Blocks. By deciding on the order and repetition of each Block, you can construct your Song.

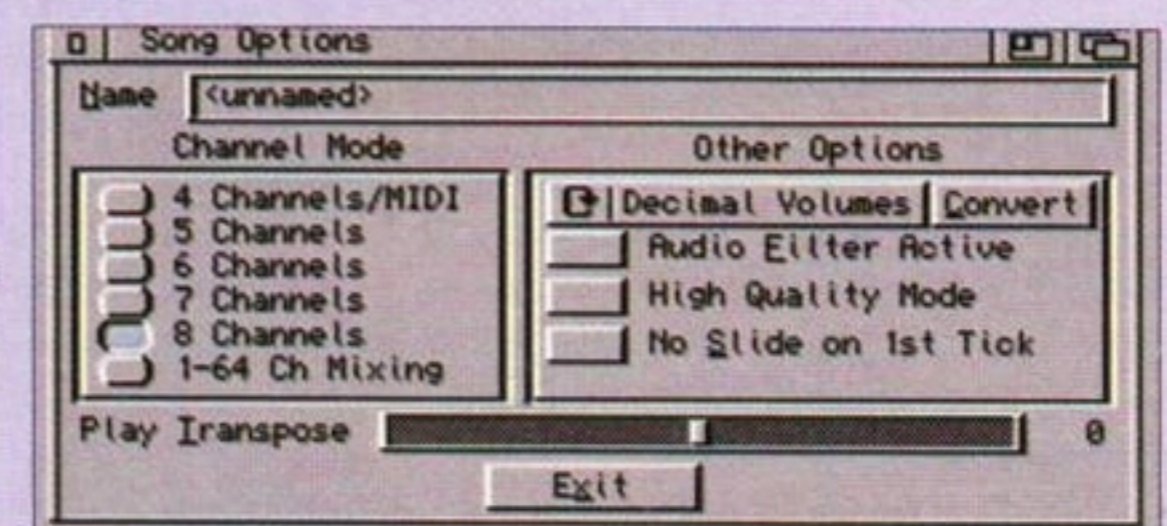
More than four channels

When composing, you find you are limited by the default four channels. Good news - OctaMED will let you play five, six, seven or even eight sounds at once. It does this by mixing together the sound samples before playing them.

Please note that the number of tracks and the number of sounds aren't necessarily the same: as OctaMED supports MIDI it's possible to have a large number of tracks all open at once.

To create some new sound channels, first increase the number of tracks up to a maximum of eight. Next, use "Set Options" from the Song menu, and click on the number of channels you want to use. OctaMED will expand the existing blocks as required, and then halve any existing samples. You will find that you can now work with up to eight sounds at once.

There are some side-effects to playing more than four sounds, but try using the "High Quality" mode to reduce distortion. If you have an A500 or A600, this will only make a difference when using 5 or 6 channels due to processor limitations. It is also not possible to use synth or hybrid sounds in more than four channels.



General shortcuts

Shift-Alt-Space	Play song	Shift-Ctrl-N	Append new default block
Remember that you may also use:			
Shift-Space	Continue song the Left Alt shortcuts underlined	Alt-Ctrl-N	Append and select new block
Amiga-Space	Play block in the Main Control window	Shift-Alt-Ctrl-N	Append and select new default block
Alt-Space	Continue block	Ctrl-D	Delete current block
Space bar	Stop playing	Shift-Ctrl-D	Delete last block
Ctrl-Space bar	Reset MIDI presets / pitchbenders / mod. wheels	Ctrl-S	Save IFF instrument
Shift-<left>	Previous sample	Shift-Ctrl-S	Save raw instrument
Shift-<right>	Next sample	Ctrl-G	Flush current instrument
Alt-Shift-<left>	16 samples backward	Shift-Ctrl-G	Flush all unused instruments
Alt-Shift-<right>	16 samples forward	Ctrl-A	Automatic Advance Down on/off (Keyboard Options)
Shift-Ctrl- <	Previous free sample slot	Shift-Ctrl-A	Automatic Advance Cursor Right on/off
Shift-Ctrl- >	Next free sample slot	Alt-Ctrl-A	Automatic Advance to Next Track on/off
F1 - F5	Select octaves 1+2 - 5+6 in normal mode, 3+4/2+3/1+2 - 7+8/8+9/9+A in MIDI mode (pressing F1 and F5 cycles through several octaves)	Ctrl-W	Advance with sound on/off
Ctrl- - (minus)	Decrease Tempo slider	Ctrl-F	Display free memory
Ctrl- + (plus)	Increase Tempo slider	Alt--	Set spacing value to length of current range - 1.
Shift-Ctrl- -	Decrease TPL slider	For example, marking a range from 000 - 002 sets spacing to 2.	
Shift-Ctrl- +	Increase TPL slider	(It's logical to subtract 1 since with a spacing of 2, the cursor skips from line 000 to 002 which is 3 lines long).	
Ctrl-I	Insert new block		
Shift-Ctrl-I	Insert new default block		
Ctrl-N	Append new block		

Other features

OctaMED can save songs in a special "multi-module" format. This makes it possible to save several songs which all use the same samples.

Use the "Set options" from the Song menu to change the name of the current song. The song appears in the title bar of the screen.

Each track can be given a different volume in relation to the others. Use this feature to fine-tune your mix. You can alter the settings from the "Set Volumes" option in the Song menu.

OCTAMED SOUNDSTUDIO V1



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Aminet Set 3, dated July 1996, consists of 4 gigabytes of software in 9,000 archives. The software is on four compact discs and has included the full versions of Imagine 4.0, XiPaint 3.2, Octamed 5.0 and some commercial games. With 95 megs Utilities, 79 megs Documents, 408 megs Text Software, 12 megs Disk/HD Tools, 7 megs Hardware related, 756 megs Pictures & Animations, 208 megs Graphics software, 394 megs Graphics & Sound Demos, 563 megs Games, 685 megs Music modules, 28 megs Music software, 131 megs Communications and more. In fact the contents of Aminet CD's 9 to 12.

AMINET SET 3

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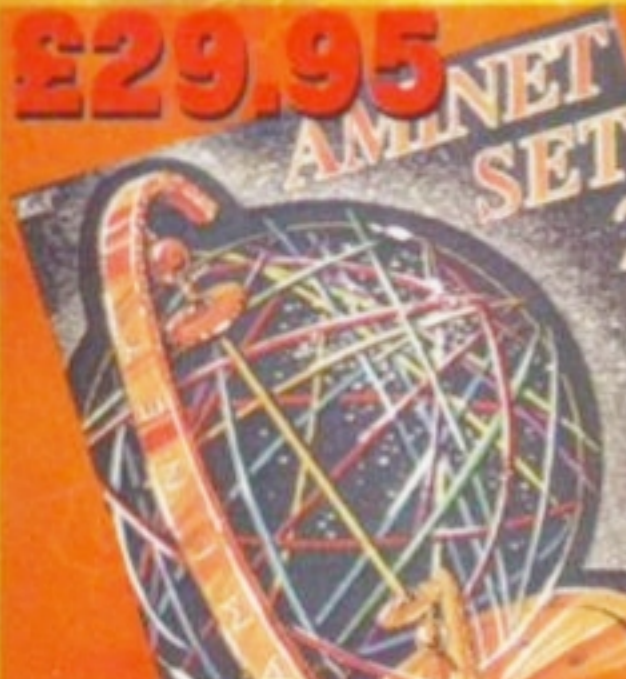
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£29.95



AMINET SET 2
Aminet Set 2, dated November 1995, consists of 4 gigabytes of software in 12,000 archives. The software is on four compact discs and has included the full contents of Aminet CD's 5 to 8. With Utilities, Documents, Text Software, Disk/HD Tools, Hardware related, Pictures & Animations, Graphics software, Graphics & Sound Demos, Games, Music modules, Music software, Communications, Amiga Development software, Business software and more. All of the archives are easily accessible with a simple Index menu system allow easy unarchiving with complete search and find facilities.

AMINET SET 2

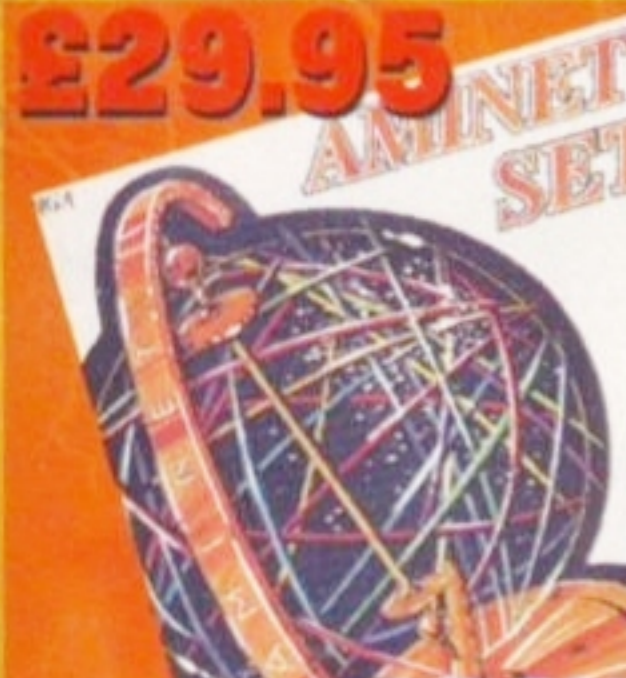
The Amiga Developers CD from Amiga Technologies comes complete with the all the developers tools and docs, provided to the official developers. Included are the complete CD32 developers tools with Build CD and ISO CD, Envoy 2.0 package, Enforcer, Workbench 2.0, 3.0, 3.1 tools and documents with the updated native developers kit, SANA II package and the installer package. Also included is a vast amount of info. A **must have for Amiga developers.**



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AMIGA DEVELOPERS CD

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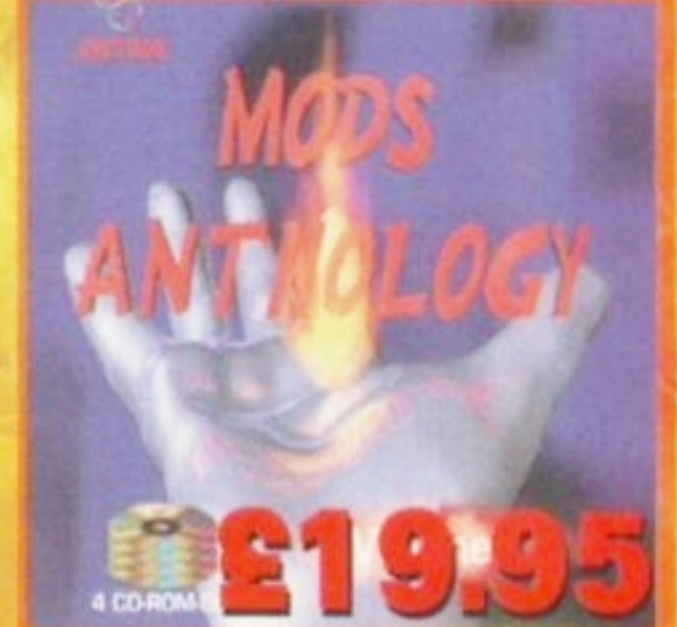
AMINET SET 1

The Amiga Repair Kit CD comes complete with the all with all the tools required to backup and rescue your precious data on hard drives. **Disk Solver 4** will rescue and restore most damaged, corrupt and even deleted files from floppies, hard disks etc. During the process it will attempt to fix all problems caused by software failures or physical damage. **Disk Solver 1.1** is a superb program that will allow you to restore your valuable data even if the Rigid Disk Block has been destroyed or over written. **Recovery** can recover files from normal or corrupted disks. **Best available Amiga backup software.**



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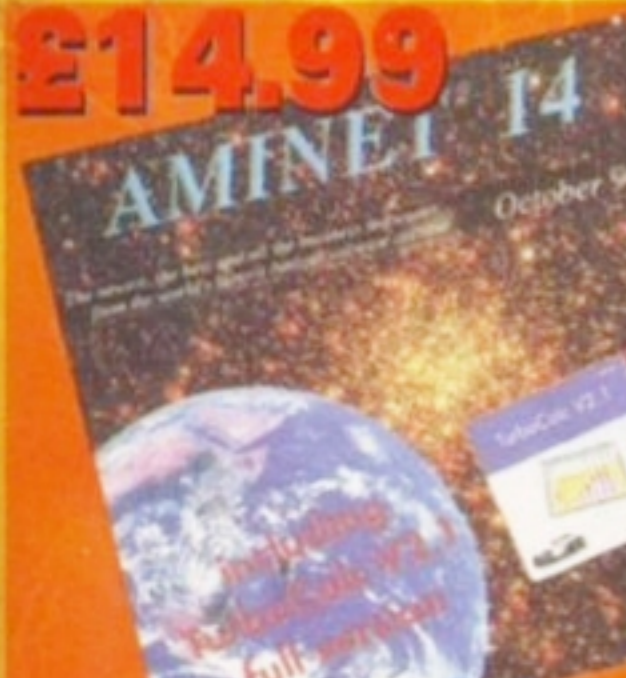
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Aminet, the worlds largest Amiga archive, provides compact discs of the sites latest software uploads. Each volume contains about 1.1 gigs of archives with a superb menu system for un-archiving the files and a simple search facility to help you find exactly the file required. The search facility will even list the compact disc that the file is on. The latest Aminet CD's contain a theme. The Aminet 14 14 theme is business with the full version of Turbo Calc 2.1 included. Aminet 15 is available in November and Aminet 16 available in December. Aminet CD's 12 to 14 are also still available. **Each Aminet CD costs just £14.99 and provides the very latest Amiga software updates on CD.**

AMINET 16 AVAILABLE DECEMBER 1996



£14.99

The Euro CD contains a vast variety of programs and data for the Amiga in the Aminet mould. However this CD differentiates itself by have the contents ready to run without de-archiving. The contents include Animations 36 megs, Commercial 21 megs, Demo's 65 megs, Disk tools 12 megs, Fonts 12 megs, Games 57 megs, Misc. 6 megs, Modules 110 megs, Music 21 megs, Objects 12 megs, Pictures 118 megs, Presentations 23 megs, Printer 1 meg, Programs 23 megs, Samples 4 megs, System 10 megs, Text files 26 megs, Utilities 16 megs and Vidules 3 megs. Full English docs. and menus.



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Art Studio 24 Bit Paint Package £ 39.95



Emulators
Part 5

CPC & MSX EMULATORS

Arcanoid, Eggbert, BombJack – remember your favourite eighties games – now find out how you can enjoy them all over again.

The software of the eighties – we all remember it. It ran on home computers from Amstrad and the Far East and there are now a choice of CPC and MSX emulators that work pretty well on most modern Amigas. Fast memory is recommended, but you don't need a 68040 or 68060 to get them running at a reasonable pace.

CPC and MSX emulation is one of the growth areas on the Amiga emulator scene, with upgrades arriving on Aminet and in PD libraries throughout the year. New versions have improved graphics and file transfer options. We've included a list of contacts for you at the end of this article.

The Amiga has two emulators for MSX software, and no less than four that will run Amstrad CPC programs. A-CPC and EmuCPC are Amiga specific, while CPE and Ami-CPC (or rather, PC-CPC) are also available for MSDOS machines.

MSX options are AmMSX1 and 2, specifically for Amigas, and fMSX which started out as a portable (i.e. slow) emulator for PCs and Unix systems, and

was re-written to make better use of the Amiga, running more than four times faster as a consequence! This confirms that native Amiga code can run rings around compiled C, hastily ported from other platforms.

THE CPC RANGE

Amstrad's CPC computers were popular in the mid 1980s. They were produced in response to Acorn's BBC micro and Sinclair's Spectrum, outselling the former but never quite matching the success of the Spectrum.

CPCs were sold worldwide under a variety of names, including Orion, Solavox, Saisho, Triumph, Isp and Schneider, in Germany. Apart from the name and minor changes in messages and key layout, they're all the same.

The original 1983 CPC 464s had 64K of internal RAM and a cassette drive. The CPC 664 supplemented this with a non-standard three inch disk drive in 1984, and soon after the memory capacity was doubled to 128K. This CPC 6128 was the standard for many years.

Amiga CPC emulators can run software for 464, 664 and 6128 models. Much later Amstrad improved the CPC graphics and attempted a relaunch, along with a keyboard-less GX4000 console, but there was little software support for the update.

MICROSOFT MASTERPLAN #13A

MSX was one of the many Microsoft schemes that did not quite come off. The name stands for MicroSoft eXtended. In conjunction with the Japanese publishers ASCII, the US micro monopolists devised a standard home computer, based on their own BASIC interpreter and off the shelf chips from Zilog, Texas and General Instruments. It was marketed between 1982 and 1988.

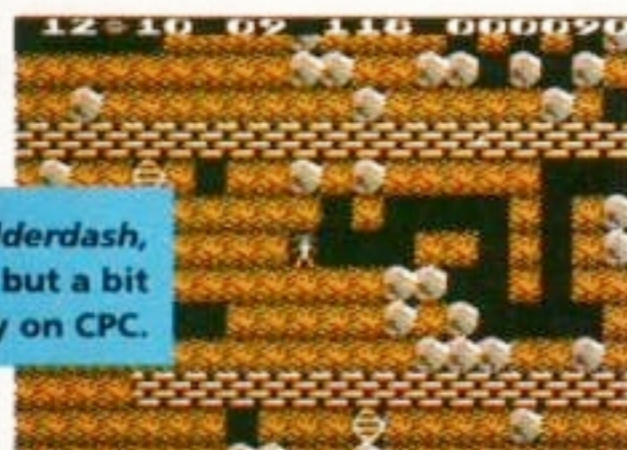
MSX rights were licensed to around 40 manufacturers, mostly in the Far East, who came up with variants on the



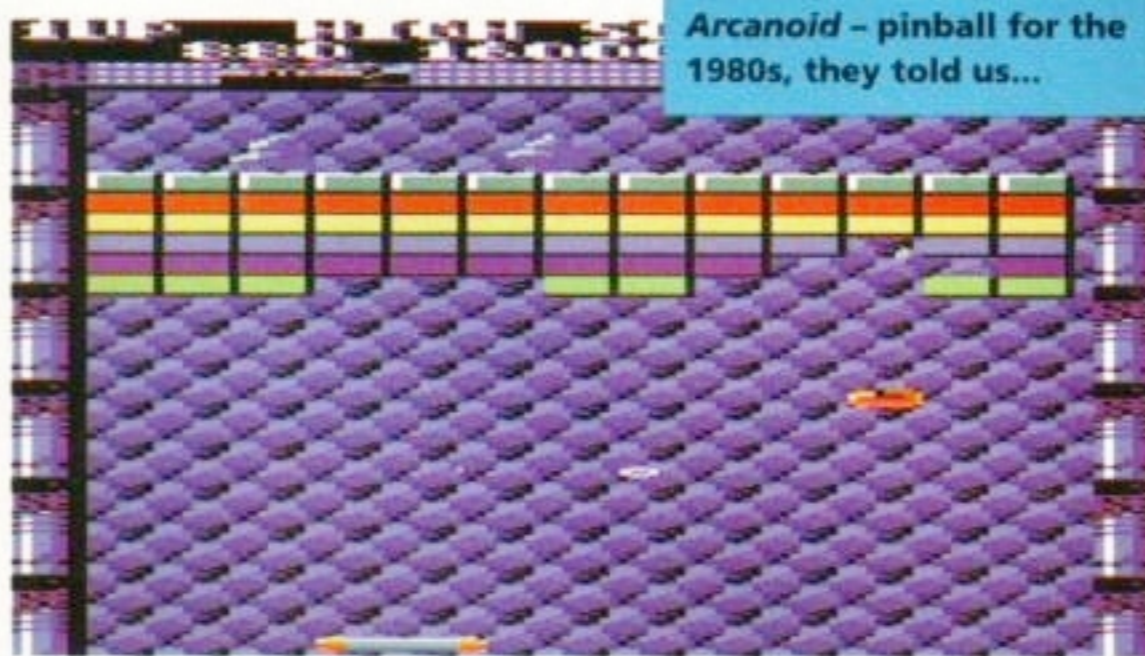
MSX_1942 – the game of the film of the war – also on Spectrum and C64.



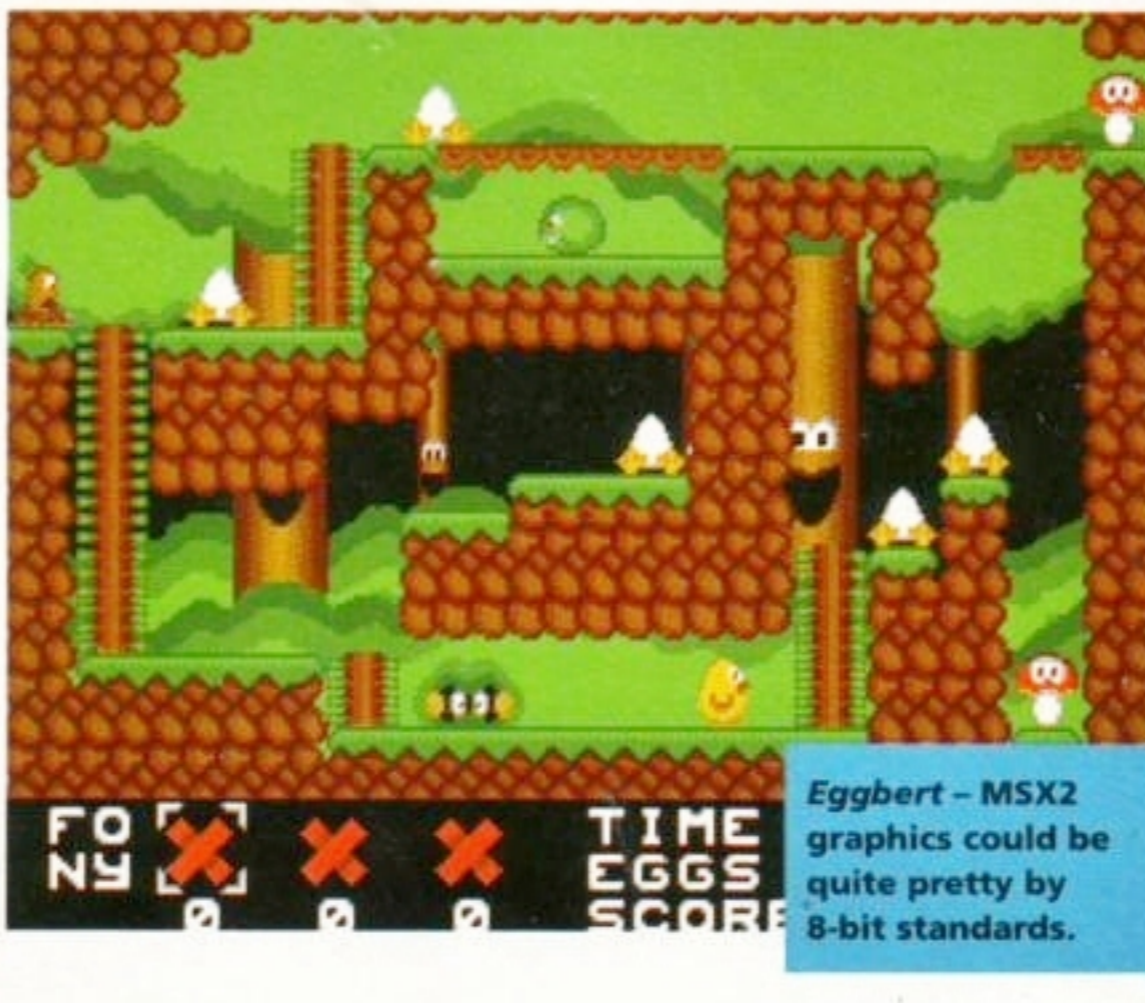
EmuCPC_1942 – the game of the film of the war, chunky remix.



BombJack – Boulderdash, playable but a bit chunky on CPC.



Arcanoid – pinball for the 1980s, they told us...



Eggbert – MSX2 graphics could be quite pretty by 8-bit standards.

CPC EMULATORS

Amstrad's decision to allow the free distribution of CPC ROMs means that CPC (and Spectrum) emulation has boomed in the last couple of years.

A-CPC

Written on an A500 with Workbench 2, Devpac and twin floppy drives. It doesn't have a built in monitor, but can emulate the 'Multiface 2', if you've got the right ROM file. The demo is usable but crippled. The full version allows direct access to real CPC disks.

A-CPC works best on a 68030 and needs at least 1Mb of RAM. It emulates all the original Amstrad models and comes in versions for old and new processors.

AMICPC

AmiCPC also expects a 68030 and like A-CPC it needs a 15KHz PAL monitor and objects to AGA mode promotion. It is faster than its rivals, but you need a 68030 or better to run most programs at full speed.

Sound emulation is limited to simple tones. Most of the documentation is in French, with about four pages in English. This is a nice freeware emulator and well worth looking at. It's coded in approved style with menus and tooltypes, multitasks well and doesn't tie up the Amiga, even if you leave it running in the background.

EMUCPC

Also written in France, version 0.4B arrived on Aminet at the beginning of this year, and works well, although rather slowly. It requires Workbench 3.0 and at least a 68020.

EmuCPU multitasks but there's not much CPU time left. It's noticeably slower than its rivals in 16-colour MODE 0 on a 68060, which suggests that it may be relying on instructions which the 68060 has to trap and emulate.

EmuCPC is freeware with just two A4 pages of documentation, but some useful example files. It supports add-on Amstrad 'ROM' files, and comes with Amiga shell utilities to format, read and write 180K 'disk' files.

There are no menus. Function keys, listed when you start the program, change screen mode, reset, swap disks and save and load snapshots. The original CPC keypad is emulated, with simple help text available on F7, as the Amiga keytops and CPC characters do not correspond. This is a common problem with all the CPC emulators – it would have been nice to have had an option to use the Amiga rather than the Amstrad keypad.

NEW VERSION

EmuCPC is being actively developed and a new version, 0.7, arrived on Aminet as this article was prepared. This one can emulate the 6128

model and programs which change the display resolution part-way down the screen.

Perhaps the most significant advance is provision for fast parallel transfers from a real CPC to your Amiga.

CPE

CPE is a relatively limited emulator, based on an early version of an eponymous emulator for PC clones, and an old Amiga emulator for obsolete CP/M business machines. The assembler source code supplied needs changes for processors after the 68000. I spent a while tweaking it, with some success, but could not get the keyboard working properly.

Disk support is rudimentary and there's no emulation of CPC sound effects. CPE does include a reasonable Z80 monitor. You're probably better off with one of the other CPC emulators, although real enthusiasts might find the source code interesting.

COMPARISONS

EmuCPC and AmiCPC are freeware and work well on all the Amiga configurations that we tested. The shareware A-CPC has problems on faster machines, but direct support for three inch disks and CPC plus features – in the registered version – should win it a few converts.

MSX standard, all compatible with the same software on cassette, cartridge and – eventually – floppy disk. Sony, Yamaha, Toshiba, GoldStar, Daewoo and Philips got onto the bandwagon, and managed reasonable sales worldwide, but the hardware did not sell particularly well in the UK, where it was perceived as overpriced and outdated compared with locally developed micros.

The original MSX standard was followed by MSX2, with more RAM and twice the graphics resolution. This enjoyed modest support in Japan and Europe. Amiga MSX emulators offer some, but not all, of the MSX2 features. Software producers aimed for the mass market and most commercial releases run fine on MSX1.

COMPARISONS

CPC and MSX computers have a lot in common, because they're based on cheap, commodity parts from the mid 1980s. They both use the eight bit Zilog Z80 processor, running at around 4 MHz, and three channel square wave sound chips based on a General Instruments design. Both have large ROMs for the day, containing a simple operating system and old-fashioned unstructured BASIC interpreters.

The Z80 processor is rather more difficult to emulate than the 6502 and 6510 used in most other home micros. It has more registers than can comfortably be fitted into the 68000 ones, and stores 16 bit values the opposite way round, requiring much swapping of bytes.

The Z80 can only access a total of 64K of memory at any time, but later users got around this with hardware to swap 'banks' of a few K from a larger pool, in and out of that space. This is hard to emulate efficiently on an Amiga without memory management hardware, and there's no officially sanctioned way to do it even with an MMU. So emulation of programs which use more than 64K of main RAM may be substantially slowed.

GRAPHICS

The most obvious difference between MSX and CPC is in their graphics. MSX was aimed at televisions, with a low resolution of 256 by 192 pixels in a maximum of sixteen preset colours, like the Texas Instruments TI 99/4A. The Memotech MTX and Tatung Einstein micros were designed in Britain around the same Texas VDP circuit, which uses separate memory for the display and Z80 processor.

CPCs support higher resolution and more colours, sharing processor and display memory. Most CPCs were sold

Continued overleaf →

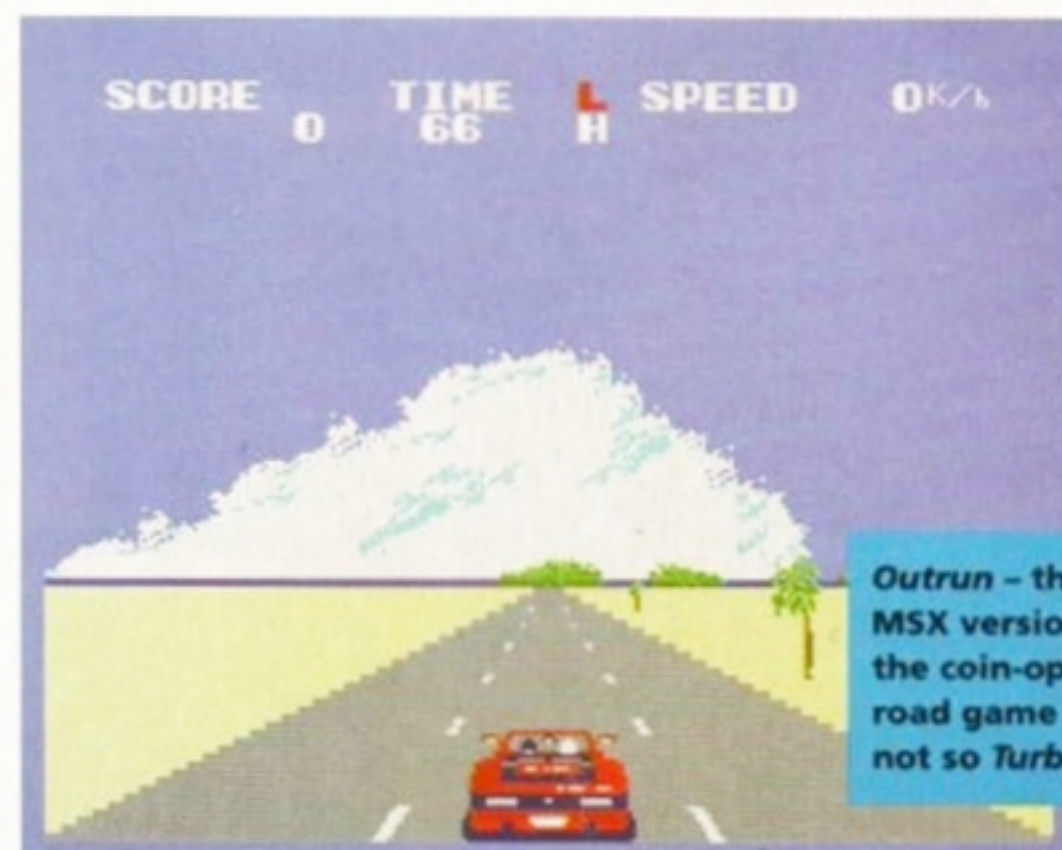
Firebird – high resolution and vertical scrolling in this MSX2 title.



Parodius – festive cartoon-style fun with Japanese captions.



Konami Table Tennis – simple, playable MSX software from Japan.



Outrun – the MSX version of the coin-op road game – not so Turbo.

MSX EMULATORS

There are two MSX emulators for Amigas – fMSX and MSX2. Both emulate MSX1 in full, with growing support for MSX 2 features.

fMSX runs at about 70 per cent of the speed of a real MSX2 machine on an A4000/030, and is just about usable on an A1200 with fast memory. It's freely distributable, with source code available.

The stability and system friendliness of fMSX belies its low version numbers, with versions from 0.4 upwards working well, and growing support for MSX2 features. By default fMSX simulates an MSX1 machine.

The original Unix version of fMSX is now at 0.9; it was written in the USA and converted to Amiga by Hans Guijt of Holland. The Amiga version requires Workbench 2 and a 68020 or faster processor. It's more than twice the speed of the real thing on a fast 68040 machine, and manages about 425 per cent speed on a Cyberstorm 68060.

The AmigaGuide documentation is fine, and you can configure the screen update and

interrupt rate for best results, adjusting the effective speed by a factor of about five times. MSX1 emulation is good, but few MSX2 screen modes are implemented and the sound chip emulation is limited to tones, without support for 'white noise' hissing effects.

Fresh out on the streets is fMSX version 0.8. This has slightly slower Z80 processor emulation than version 0.4, but improved sound and screen handling. The differences stems from support for the relatively large memory of MSX2 systems.

fMSX used to implement memory bank switching by copying banks in and out of the simulated Z80's 64K space. Now it selects the required bank as it goes along, making code that does not switch banks rather slower, but massively improving performance on programs that do a lot of switching around.

MSX2

MSX2 is shareware and comes from Spain. The demo version 2.1 on Aminet is time

limited, stopping after just ten minutes, and lacks some of the features of the full version. It requires Workbench 2 and at least 2Mb of preferably fast RAM. MSX floppy disk access requires mfm.device, part of CrossDos.

MSX2 is a bit of a hack, designed to give reasonable speed even on a 14MHz 68020. It disables multitasking and it's incompatible with the 68060 and multisync displays, but it's about twice the speed of fMSX on 68020 and 68030 systems.

The author claims that 68040 systems should be compatible once the copyback cache is disabled. Sound, graphics and processor emulation are almost complete, although still not quite perfect. Most MSX games run well.

COMPARISON

fMSX just keeps getting better, but I still expect that a few 68020 and 68030 users will find the extra features of MSX2 well worth the \$30 registration fee.

← in a bundle with a monitor, allowing up to 640 pixels on a line – a bit fuzzy on a colour screen, 320 by 200 in four colours, or 160 by 200 pixels in sixteen colours chosen from a palette of 27, the favourite mode for games.

WEIRD DRIVES

Peculiar three inch 40 track disks were used in early MSX and CPC micros. These have a nominal capacity of 180K per side. The three inch Hitachi format was once a rival for Sony's 3.5 inch disks, now ubiquitous on Amiga and most micros. Hitachi opted for a narrower, oblong format to take advantage of Japanese postal concessions intended to allow cassette tapes to be mailed at a discount rate.

MSX eventually opted for Sony-sized disks in Microsoft's 360K or 720K format, which can be read and written on any modern Amiga with the bundled CrossDos driver. The same is true of three inch MSX disks – in 180K or 720K format – if you connect an appropriate drive.

CROSS EMULATION

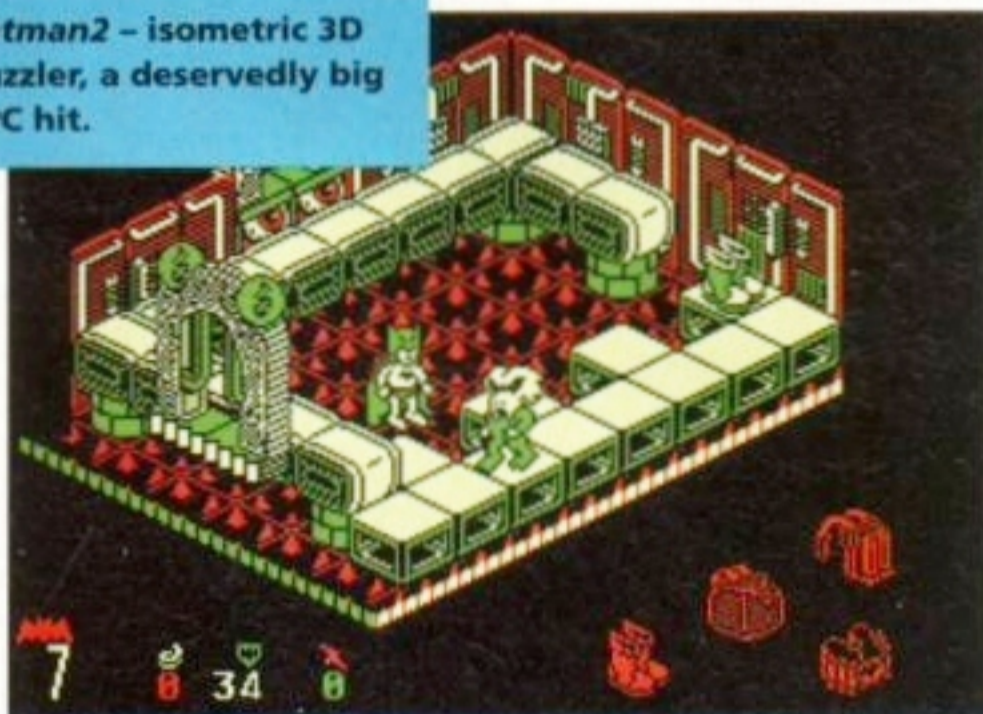
fMSX is available for NetBSD, but lacks Amiga optimisations so you'll need a graphics card and quick CPU to do it justice. The same situation is likely if a Unix CPC emulator is ported to Amiga hardware. In either case, the native Amiga emulators are sufficiently good that you'll probably prefer them unless you spend most of your time in NetBSD already. I've yet to see useful MSX or CPC emulators for Macs, so Shapeshifting is – for once – not an option.

Some text-based CPC software runs under CP/M, the seventies business operating system. If you want to run this on an Amiga you're best off using a CP/M emulator, rather than trying to load Amstrad CP/M into a CPC emulator. You can find several CP/M emulators on Aminet and Fish disks.

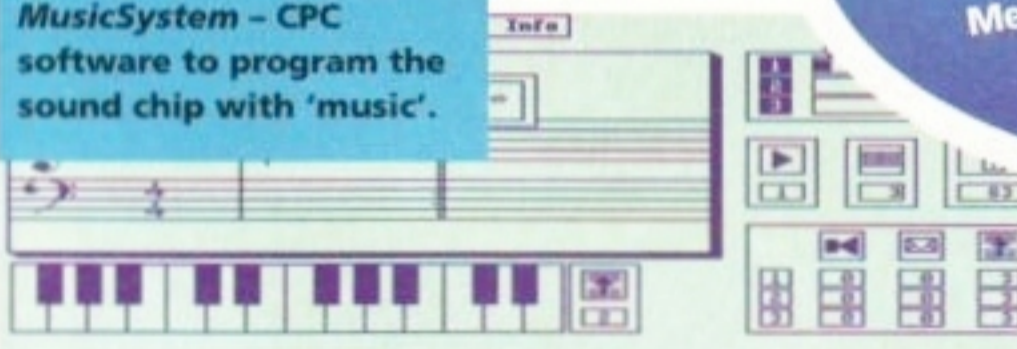
NEXT MONTH

There are dozens more emulators for Amigas which have yet to come under our scrutiny. We'll report on some more next month. Meanwhile, all six emulators mentioned in this column appear on the AFCD, along with documentation and example files.

Batman2 – isometric 3D puzzler, a deservedly big CPC hit.



MusicSystem – CPC software to program the sound chip with 'music'.



fMSX Unix/X 0.9



Gallious by name, platform by nature – a typical MSX1 run 'n' jumper.

CPC Invaders – plenty of colours but not much resolution (except for the Amiga requester on top).



NET RESOURCES

MSX

<http://www.freeflight.com/fms/MSX>
<http://il.ft.hse.nl/~wiebe>
<ftp://funet.fi/pub/msx>

NEWS:

comp.sys.msx

CPC

<http://andercheran.aiind.upv.es/~amstrad>
<ftp://ibp.fr/pub/amstrad>
<ftp://nvg.unit.no/pub/cpc>

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comp.sys.amstrad.8bit

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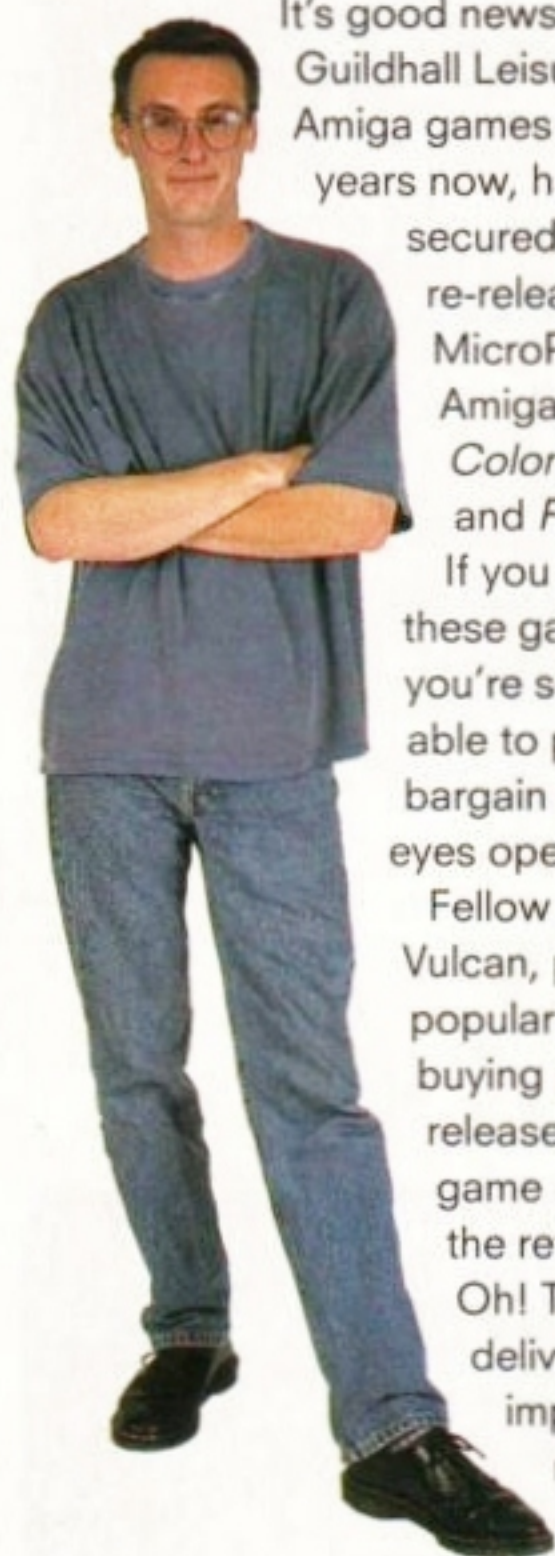
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SCREEN PLAY

Previews



It's good news month folks. Guildhall Leisure, stalwarts of the Amiga games scene for several years now, have recently secured the rights to re-release some of MicroProse's classic Amiga games, such as *Colonization*, *UFO* and *Fields of Glory*. If you haven't got these games in your library you're soon going to be able to pick them up at a bargain price, so keep your eyes open!

Fellow Amiga stalwarts, Vulcan, prove why they're so popular with the games buying public with the release of their corking game *Bograts* (check out the review on page 34). Oh! The postman's just delivered something important. After you've read these previews, rush along to page 38.

What better way to start '97 than treating yourself to some new games? And what delights are going to be tempting you? You've come to the right place, my friend...

AMIGA FORMAT'S REVIEW POLICY

Every month we scour the world's software houses for the latest and greatest Amiga games. We try to ensure we keep you as up-to-date as possible and we'll stop at nothing to bring you the best, definitive, no-nonsense reviews of the games that matter.

WHAT OUR REVIEW SCORES MEAN

- 90+%** The crème de la crème. Only the very best, most playable and original games are awarded an AF Gold – the most highly prized rating there is.
- 80-89%** These games are very good, but due to minor flaws are not the finest examples of their genre.
- 70-79%** Good games which are worth buying, especially if you have a special interest in a game type.
- 60-69%** Average releases with somewhat limited gameplay and appeal. Games in this category tend to be flawed.
- 50-59%** Below average games which are unlikely to impress your mates or your wallet. Avoid.
- 40-49%** Overwhelmingly poor quality games with major flaws and appalling gameplay.
- Less than 40%** The absolute pits.

TINY TROOPS



They're troops and they're tiny. As you can plainly see. They're also in the garden in this picture.



No young chap's bedroom is complete without a Scalextric set on the floor.



A day at the beach spoiled by warring factions blowing each other up. Such is *Tiny Troops*.



It's a jungle out there! Well, it would be a jungle if you were as small as these guys.

All Amigas

■ Vulcan Software ■
01705 670269

What if there was a war and nobody came? That's precisely what's happening now, apparently. There's these two alien races you see (the Klutes and the Furfurians if you're interested) who came to Earth to have a bit of a scrap because they couldn't afford to devastate their own planet anymore.

The only thing is, none of us has noticed yet. These two alien races are dead small see, they've been at each other's throats down by our feet. They've been having a pop at each other all over the shop – on the beach, in the kitchen, in the garden – you name it and there's probably been a famous battle there.

And now it's time for you (and a mate if you can round one up) to get involved in the action. Oh yes, folks. If you hadn't actually guessed what this game's all about simply from the title, you'll be pleased to learn that



The armies in *Tiny Troops* square up to each other. We're not sure yet what the fire means.

it's a strategy game based on you controlling small forces of tiny warriors battling other tiny warriors through the 65 available scenarios.

The game takes the familiar 'click on icons to make your troops do things' format, which has proved itself a very effective method of control in the past. We're really eager to get our hands on this one and you can expect a full review of *Tiny Troops* next month. In the meantime, keep your eyes on the ground!

Continued overleaf ⇒

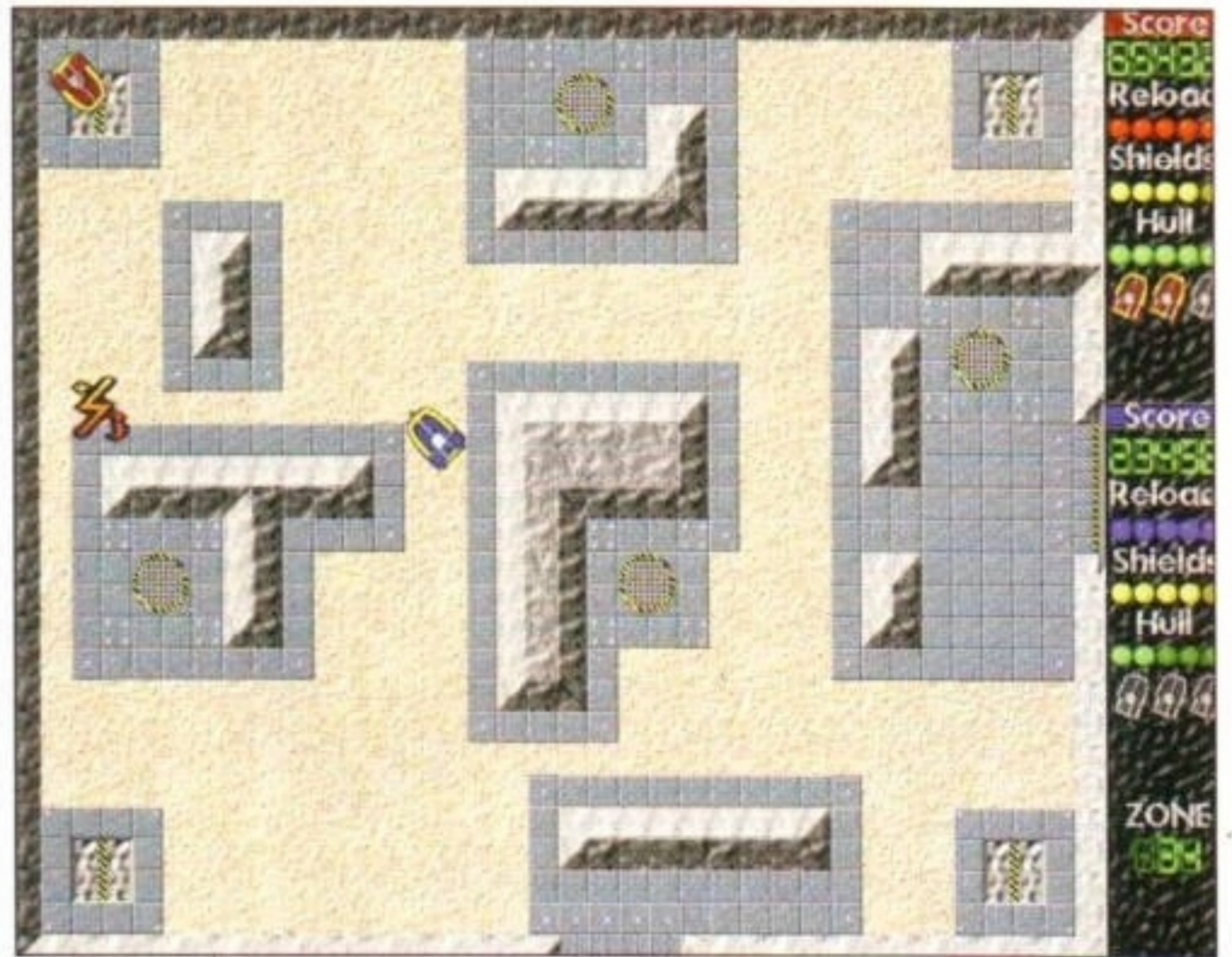
ZONE 99

2Mb Chip RAM, 2Mb Fast RAM
with 030/25 CPU minimum ■
Aurora Works

American coders Aurora Works have a treat planned for you come March when they release the commercial version of their *Zone 99* game. It's a tank battle affair where you and a mate (or you can battle computer controlled opponents) battle your way through up to 99 zones (spook!), hitting the hell out of each other in your hover tank and trying hard to reach the various power-ups before the enemy.

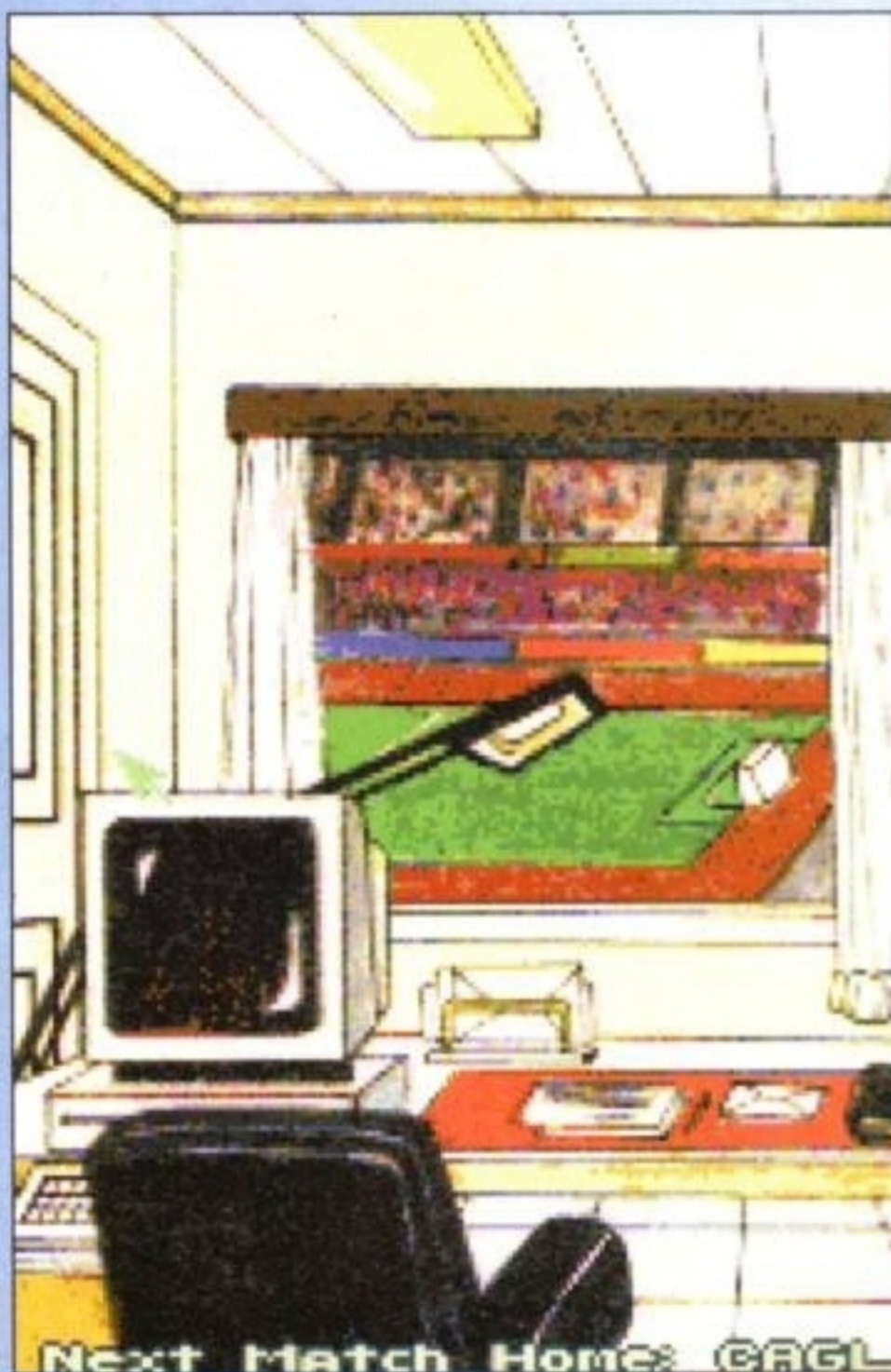
Although Aurora have loads of whoop-dee-doo features and bells

and whistles planned for the commercial version (the current Shareware version only features 10 zones and is two-player only) they would like to stress that in order to appreciate the 640x480, 256 colour play screen, running at up to 48 frames per second you're going to need a porky machine. If the system requirements at the top mean nothing to you don't worry, I've had a brief word with Ben and Nick who understand these things and they've told me not to worry about it. Aurora themselves admit the spec' is likely to change before the game hits, so we'll keep you up with developments as and when they come in.



A couple of tanks square up to each other in *Zone 99*. Our money's on the blue chap at the moment, because red seems a bit timid.

EURO LEAGUE MANAGER



The office. Access all areas from your comfy armchair. Just like a real manager.



Match highlights. Cagliari are about to score. Tsk.



I've always fancied managing the old lady...



Spike's not been in the job long, give 'im a chance!



Get the low-down on each player and then sell 'em anyway (well, he let a goal in didn't he?).

Manyx ■ 0181 542 2678

While we still wait for Eidos's (formerly Domark) *Championship Manager 2* (ooh! That sounds like fun, when's it coming out? etc etc) Manyx look set to pip them at the post with *Euro League Manager*.

The game boasts English, Italian, French and a special Euro Fantasy League and Manyx are confident that the tactics budding managers employ to achieve success in one country is unlikely to reap rewards somewhere else – that sounds like the game's going to have some, not insubstantial, longevity, which is a very good thing.

Although the game doesn't currently feature real player's names or the correct

league and cup competitions (legal reasons mate, copyright and all that), Manyx are swift to point out that the game's going to come complete with an editor so you'll be able to change things to suit. There's also three difficulty levels included, so even Bristol City fans should be able to play the game – which is nice.

Manyx are confident their game, with its inclusion of several leagues, options for transfers (you can part-ex players for example) and so on, will knock all the other football management games back into the Vauxhall Conference. We'll be trying the game out on the field just as soon as we jolly well can.

Bograts

You need a licence to fish but, apparently, even **Andy Smith** can be a parent...



Here you're shadowing your blue-headed Bograt. The one that eats baddies for you.



Your red-headed Bograt's the only one who can collect that red key opposite you.

Try Bograts out for yourselves with our excellent playable demo



Oh look! Some sort of storyline. Magic eggs, I ask you? Whatever next?



Tricky blighter, Johnny Sprog. Before you know it they're out of nappies and off wandering round enchanted castles. There's none of this 'crafty fags and games of doctors and nurses behind the bike sheds' anymore. It's all magic eggs and spikey pits. Oh lorks.

Bograts is one of those puzzle games where you're manipulating the environment in order to facilitate the progress of a dumb character. The dumb characters here just happen to be a couple of small green things called Bograts. They wander around aimlessly, simply changing direction whenever they come into contact with an obstacle (wall, block, whatever) or dying when they wander into something that kills them (spikey pit, flames and so on), where upon they re-generate at the level's start point and start wandering aimlessly again.

Clear the way

Your task is to get everything out of their way so they can wander aimlessly into the exit – yeah it's sounding a bit like *Lemmings*, but let's delve deeper. There are 60 levels to guide your chums through and Vulcan have decided to

restrict the simple, learning curve, beginner levels to the minimum. After the first couple of levels you're in the thick of the action as you have to figure out in just what order switches should be thrown, blocks should be pushed and lifts operated to get your chums to the exit. Fortunately there's no time limit, but the pay-off here is that you have to work to save your position.

You're all heart

Littered around most levels are red hearts – collect 20 of 'em and you can save your position in one of the five available slots. This becomes very important later as you find yourself having to step back a level or even two when you die because you haven't been able to save your game for a while. How do you die? The hearts you collect also equate to the amount of damage you (and your Bograts) can take. When someone meets death at the hands of an enemy blob you can say goodbye to five hearts. The game doesn't end until you can't afford to lose any more hearts. And you wanted to save your position? Tough luck, bucko.

Defeating enemies is not as straightforward as you'd think either. Only one of your two Bograts can



Keep clear when setting off explosions. They can severely damage your health!



Another bomb goes sliding towards its target. Wait a few secs and it'll go off.

THERE'S A BOGRAT IN ME KITCHEN...



Because we're such helpful people here at AF, we've reproduced a typical *Bograts* level with some simple instructions. Don't panic, but be prepared to think some.

- | | |
|--|--|
| 1 Ladder controlled by switch number 11. | 14 Pick this up and have an extra bomb to play with. |
| 2 A baddie that can only be killed by the blue Bograt. | 15 Switch to control the direction of belt 19. |
| 3 Ladder controlled by switch number 10. | 16 A handy spring to bounce you back to 10. |
| 4 Key that must be collected by the red Bograt. | 17 Collapsing walkway. You only go over this once. |
| 5 You have to re-start the level from here. | 18 White key needed to open door 20. |
| 6 Ladder controlled by switch number 7. | 19 A two-direction conveyor belt. |
| 7 Controls ladder 6. Currently the ladder's off. | 20 Collect key 18 and you can open this door. |
| 8 You. Accessing the terminal that gives you a map view. | 21 This block can be destroyed with a bomb. |
| 9 A moveable block. Use this to put fires out. | 22 Push block 9 over this fire to put it out. |
| 10 This lets the Bograts reach key 4. | 23 A pit full of deadly spikes. Put block 9 here. |
| 11 The first switch you pull to start the Bograts off. | 24 Key number 4 needed to open this door. |
| 12 Your lovely offspring. Bless 'em. | 25 This block must be blown up before... |
| 13 Lots of lovely hearts that are crucial to collect. | 26 ...reaching the exit here. Wasn't too tough was it? |

deal with baddies, and he/she/it does it very well without any help from your good self, but this does mean you then have to think about timing your switch pull or whatever so that the baddie-eating Bograt meets the baddie first. And in the same vein the other Bograt is the only one of the pair that can pick up keys which you need to open doors. Again, you've got to plan your actions to get the key-picking-up Bograt to the keys. Oh yes, it's tricky stuff alright.

Plan ahead

Damn tricky stuff. Each and every level will have the ol' grey matter chugging away, which is excellent. What isn't so excellent is just how unforgiving the game is should you make a small mistake. OK, so that's part of the gameplay and you should learn not to make even small mistakes, but sometimes it's unavoidable. The graphics are not the best in the world. They look alright but sometimes they're confused, it can be difficult to see where a platform ends until you've fallen off the damn thing. And once you've done that there's no chance of getting back. See what I mean about the importance of collecting hearts?

And it's not just a case of having to think about the solution that keeps you playing, once you've figured out what you've got to do, the actual doing bit is just as important – especially as in most cases you're only going to get the one shot. You'll find yourself hitting the space bar and

loading up the latest save after even your slightest error.

Ends well

Having said that, the consequences are a great sense of achievement, nay relief, and happiness as you see the last little Bograt trundle into the exit which is what every good game should give you. And this is a goodie. It's better than the applaudable but not quite wonderful *Blobz* (AF 90, 71%) but it's not quite *Format Gold* material. It comes very close, but the confusing graphics take the edge off it (I mean why have platforms that are obvious because they have brown lines describing them and then go and have the same brown lines along areas that definitely are not platforms? Forget that though, *Bograts* is a corker. Very little is left to chance (though when you do manage to pull something off more by luck than judgement you'll be pleased. No, you will!) and some of the levels require a long and complicated



The only way to get to the secret room below you is to find the secret entrance...



sequence of actions to pull off. The chances are you're not going to get it right first time though. Progress is usually achieved by tackling each of the level's puzzles one at a time – tricky when you have to keep doing the same preceding piece over and over and over again!

Bograts is great. I like it a lot. If you're at all tempted by games that can be solved with a bit of thought and application then you're going to like it a lot too.



Just look at all them hearts! Getting to them could be harder than it looks though...

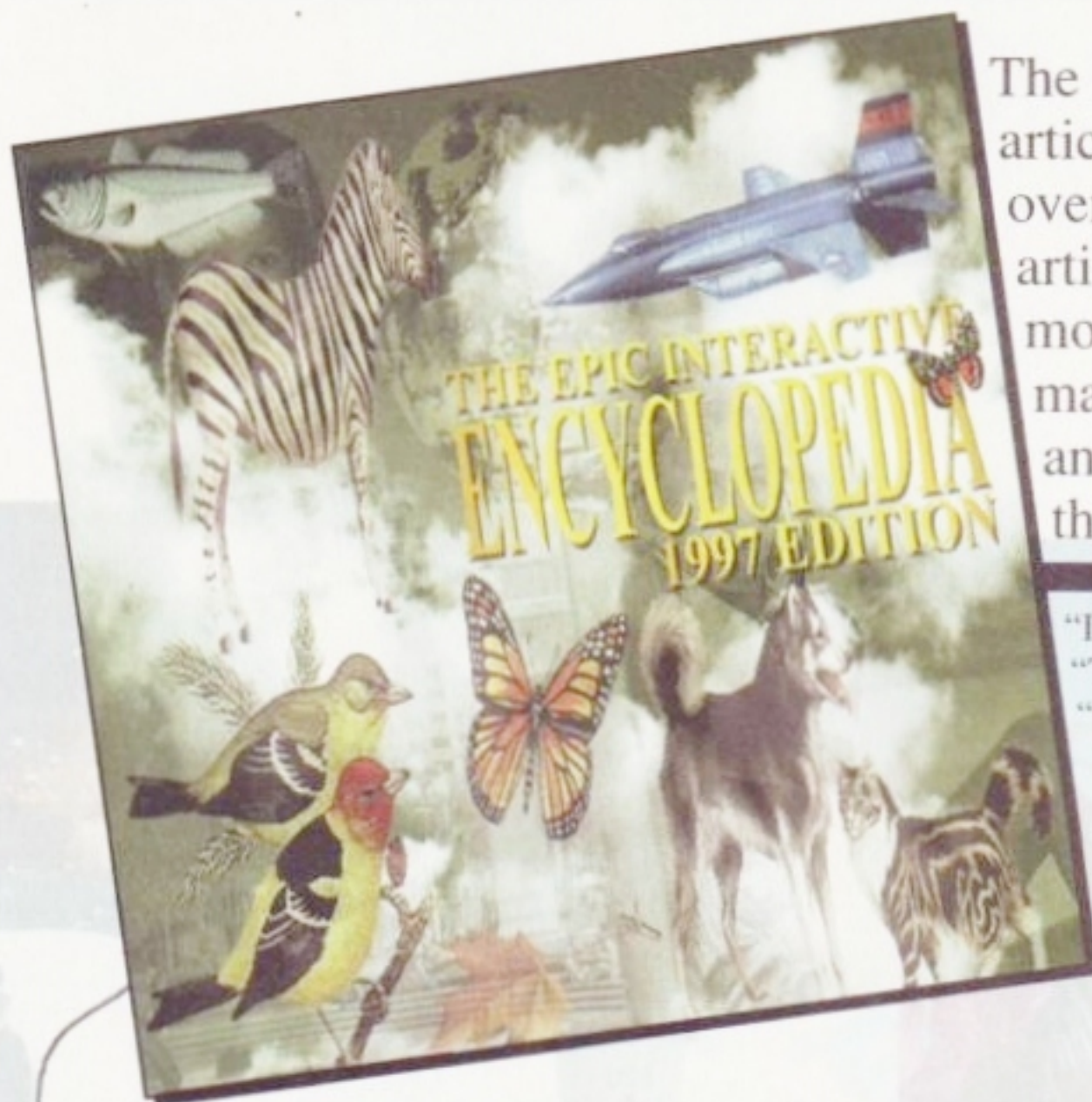
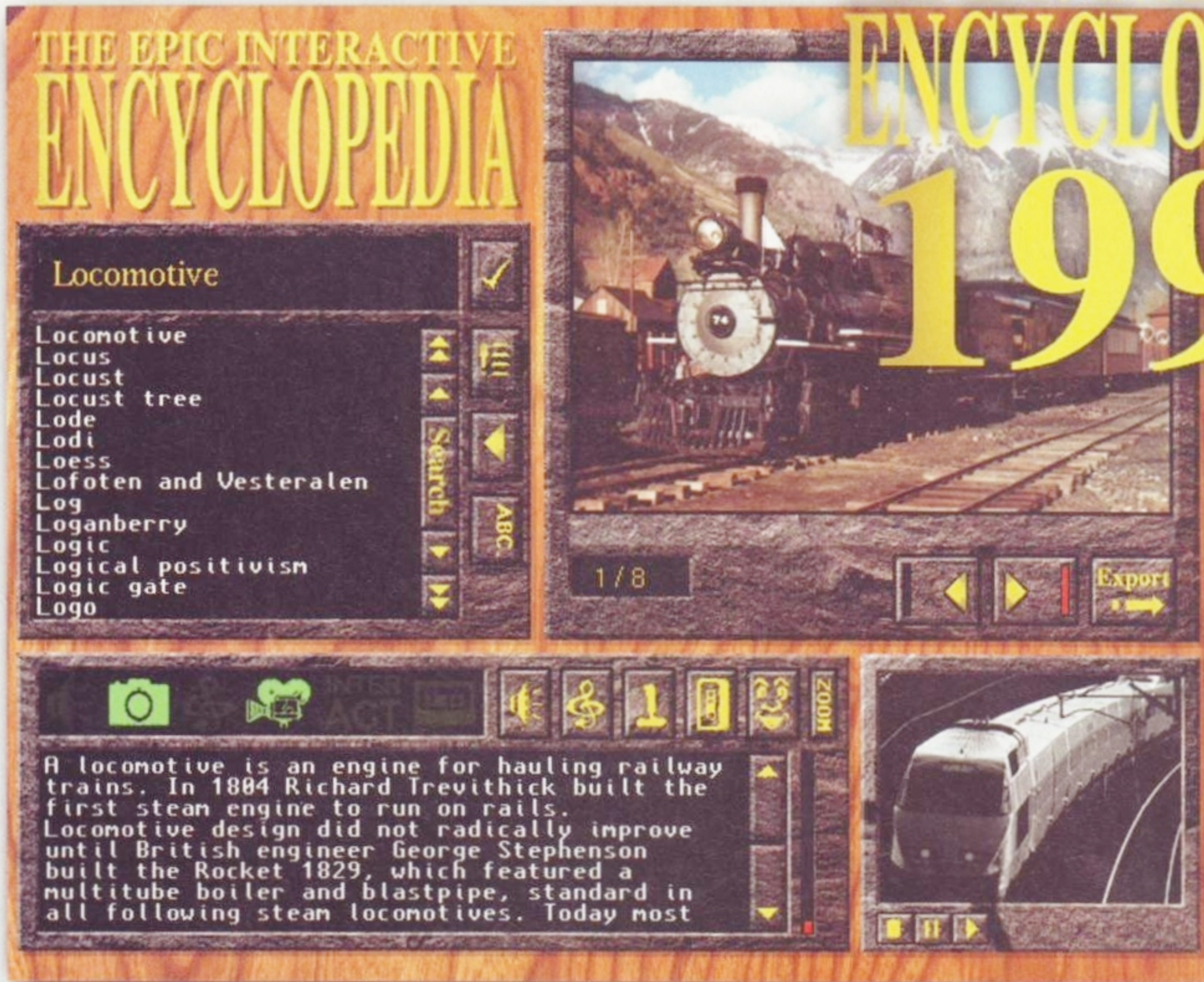
PUBLISHER: Vulcan Software
01705 670269
PRICE: £12.99
VERSIONS: A1200 only
REQUIREMENTS: 2mb and a Joystick
RELEASE DATE: Out now

GRAPHICS: ●●○○○
Confused in places.
SOUND: ●●○○○
Very little to look forward to.
ADDITION: ●●●○○
Lots of 'Just one more go'.
PLAYABILITY: ●●●○○
Very tricky at times.

OVERALL VERDICT:
Another cracking good game from Vulcan. One for gamers who like to spend hours pondering over puzzles. Requires not a small amount of manual dexterity too. It's almost excellent.

87%

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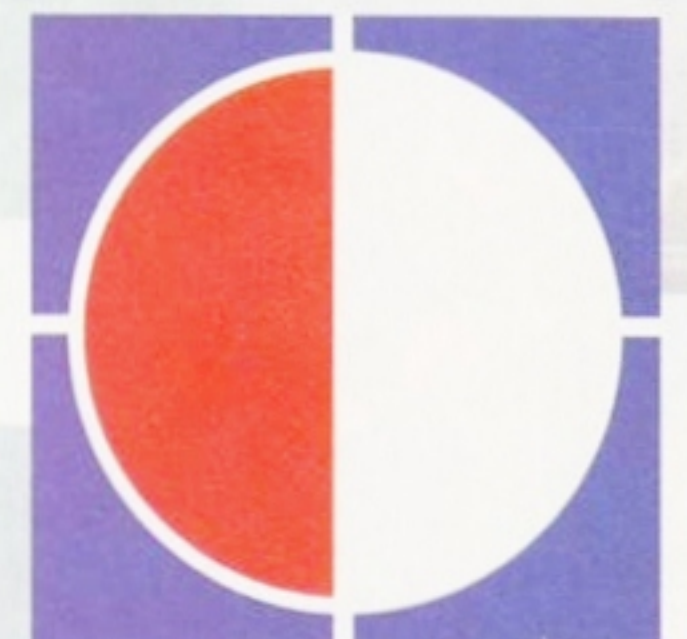
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Minimum system requirements: AGA Amiga (A1200/A4000) 4mb ram - 6mb recommended, Hard drive, and CD-ROM drive. E&OE



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CHAOS ENGINE 2

Mention stabbing someone in the back and **Andy Smith's** eyes light up. He's erm, 'mad' for it. Or something.



Obey the Baron

Onto the game tasks. Before each level starts you're told what you have to achieve in order to open the exit. These tasks range from pushing things from one place to another (never very far), to throwing switches, to destroying specific baddies. Points are awarded for completing a set task ahead of your opponent and it's these points around which the game revolves.

In order to progress through the game you have to amass more points on each level than your opponent.



Player 1 has picked up and activated a special weapon. This one freezes the opponent for a number of seconds.



Player 2's about to pick up the key in a building while player 1 waits in ambush. Dirty tricks done dirt cheap are the order of the day.

They're going to do the same to you as soon as they get the chance, so get in there first.

But back to basics. You and a mate (or the computer) each control one of four characters who must run around a small area, attempting to collect things and complete small puzzles in order to reveal the exit.

Let's take the characters first. The main differences between them are their speed and their level of intelligence. Some will rush around the place getting to all the objects before you, while others are more concerned with trudging around desperately trying to kill you at each and every opportunity.

Basically, which ever one you pick as your adversary should dictate what kind of game you're going to have. The differences between the characters though is not as marked as we'd hoped, certainly in the early levels at least, it seems to make very little difference who you choose as your opponent.



Choosing characters. The Gentleman character is a tough adversary, so don't pick him as your computer opponent.

Total competition, that's what this is all about. You versus the other person (who could be the computer if you so desire) in a frantic battle to reach each level's objectives. None of this cooperation nonsense. Just stab 'em in the back and stab 'em good.



If the computer opponent does better than you on a level (even if you both get out together), you lose a life and must replay the level again.





The players take on a nasty bunch of jaguars. Each jag' killed drops a crystal and that's what the players are really after.

Points are won by destroying baddies (including your opponent) and completing tasks. Points are lost when you are killed. And you will often be killed as all it takes is a couple of shots to polish you off. Even if your enemy has run out of ammo (each character is armed with a different weapon, but none of the weapons can fire more than a couple of shots before running out) if they manage to stand next to you and smack you in the mouth a couple of times you'll bite the dust.

The good thing about dying is that you're never dead for long and you can be dead as many times as you like during a level – all you're losing is points. The very bad thing about dying is that you drop all the items you've collected through the level and when they're on the floor your enemy can run over 'em and scoop 'em up. And yes, this does mean that in two player mode especially you can spend bloody ages stuck in the same room with your



Of course, no Bitmap game would be complete without sunglasses. Pick this pair up and become invisible!

opponent as you each take it in turns killing and being killed over one key!



Three worlds

The two player mode is significantly different in that you pick a set number of levels to play (4, 8, 12 or 16) and these levels are selected from each of the game's three worlds: Medieval, Aztec and Chaos. Although you're still competing, you don't have to re-start a level if your opponent reaches the exit with more points than you (which

obviously means you do have to re-start a level in one player mode), you simply move onto the next level. The winner is the person with the most points at the end of the set number of levels. It's much easier for your chosen character to be 'upgraded' as well and this means you can take more hits and your weapon can fire more shots before running out.

In one player mode it's a laff. It's not a rip-roaring belter of a gaming experience, but it's satisfying. In two player mode however, things are much better. Not simply because you're playing against an unpredictable human, but because the game works better. In one player mode you'll be lamenting the fact that when you kill your enemy they only stay dead for a few short seconds – not usually long enough to gain a decent advantage over them. This doesn't matter quite so much in two player mode because the emphasis is slightly different and you get much more of a chance to do the old fave sneaky things (standing next to the exit when you know your opponent has the key and blowing 'em away just as they get to you!).



Double the fun

Despite the fact that you have four characters to choose from, you'll find the computer manages to control its character with consummate ease. The Navy, for example, is supposed to be thick, slow and hard to kill. After just a couple of games on the early levels you'll realise that he seems to know where all the keys are and where all the short-cuts to the keys are as well. And as for slow, well, he manages to zip around the place well enough!

In one player mode Chaos Engine is very very tough. That means plenty of challenge for you, but unfortunately I found the enjoyment dissipating sooner than I expected, simply because the computer seemed to have way too much of an unfair advantage. Two player mode? Great fun.



Some of the baddies are a bit odd. Watch out Brigand, there's a big blue Peter Lorre-style hand creeping up behind you!



The dirtiest of tricks. Simply find the exit and wait for your opponent. When he arrives, shoot him.

PUBLISHER: Time Warner
0171 391 4300
PRICE: £29.99
VERSIONS: A1200
REQUIREMENTS: A1200
RELEASE DATE: Out now

GRAPHICS: ●●●○○
It looks fine but not amazing.
SOUND: ●●●○○
Just about the same as the first game.
ADDITION: ●●●○○
Not as rivetting as hoped.
PLAYABILITY: ●●○○○
Can take some getting used to but worth persevering
OVERALL VERDICT:
It's good but not brilliant. It's lots of fun with two players and worth a look if you loved the first version.

85%



Your level objectives are described by a character called The Baron. Pay heed to what he says because there's no way to review the objectives later.

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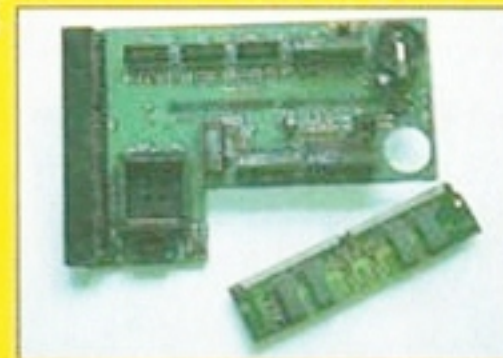
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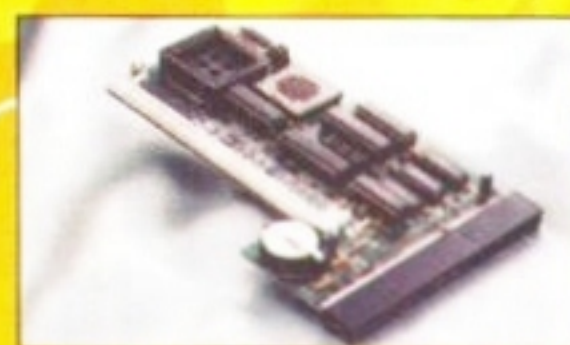
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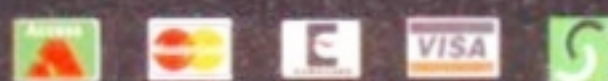
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Reader Games

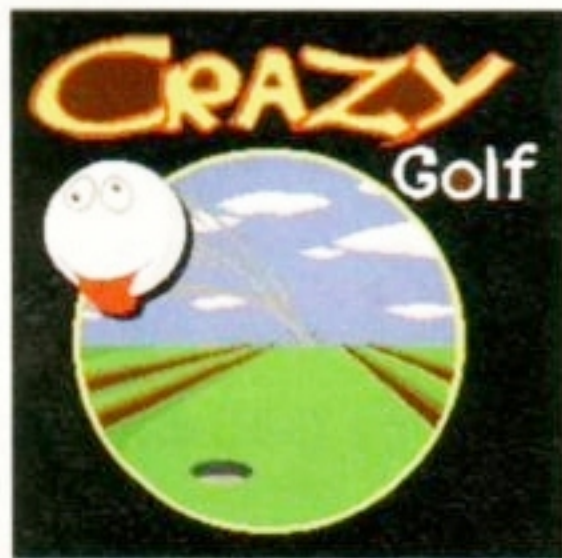
They are the Amiga equivalent of prize marrows at the local flower show. They are, of course, the...

And an absolutely fine selection of marrows we've got for you too! The standard of Reader's Games we're getting into the offices improves month on month and so we end up in the situation we're in now - absolutely loads of cracking games! Naturally, some are of a slightly higher standard than others but the whole point of this

section is not to tear apart little Johnny's attempts to combine gameplay and graphics, but merely to offer advice on how the game could be improved and polished. If you've always had a secret desire to create a game then get hold of one of the popular programming tools (Amos, Blitz Basic and so on) and give it a crack!

The worst you could do is have to listen to some professional advice on why your creation isn't quite up to scratch and the best you could do is win yourself a lovely £50 note. And there are commercial companies out there who pay lots of attention to this section. And we mean LOTS of attention. Get to it, my little Amiga horticulturists...

GAME: **CRAZYGOLF**
AUTHOR: **ADAM GORE**
LANGUAGE: **BLITZ BASIC 2**



It's a golf game - but on a wacky course. And what a corker it is too! Readers with long memories will remember Adam's earlier game which featured in Reader Games (*Zombies AF85*) and was described as 'Adam demonstrates that he's paid great attention to detail and has

ensured that the game has a high degree of playability'. The same can be said for *CrazyGolf*.

There are 10 wacky courses for you and a chum to play around on and controlling your ball is dead easy - move the crosshair by moving the joystick left and right and decide the strength of the shot by moving the joystick forwards and backwards. Easy as that.

What makes this so much fun though are the courses - you have to hit trampolines to get across stretches of water, you have to negotiate your ball

through mine fields of teleporters and make little taps along wooden walkways. It's great fun and extremely easy to pick up and play without being at all easy to get right. There's the right level of frustration here which makes it addictive too.

This might upset some, but it's actually a better game than *Sensi Golf*. There's more that could have been added but Adam's (quite rightly) kept it all simple to start with and concentrated on making sure the features he has introduced add to the fun. Top drawer stuff or, as is the current office fave saying: 'Job's a good un'.

VERDICT: VERY PROFESSIONAL AND VERY PLAYABLE. SIMPLE TO PICK UP AND PLAY AND CHALLENGING TOO. IF YOU COME ACROSS THIS YOU'D BE WISE TO SNAP IT UP. A FINE EXAMPLE OF HOW A SIMPLE IDEA, IMPLEMENTED WELL, CAN BE SERIOUS FUN.



Those yellow squares are teleporters so beware. There's ice in the middle.

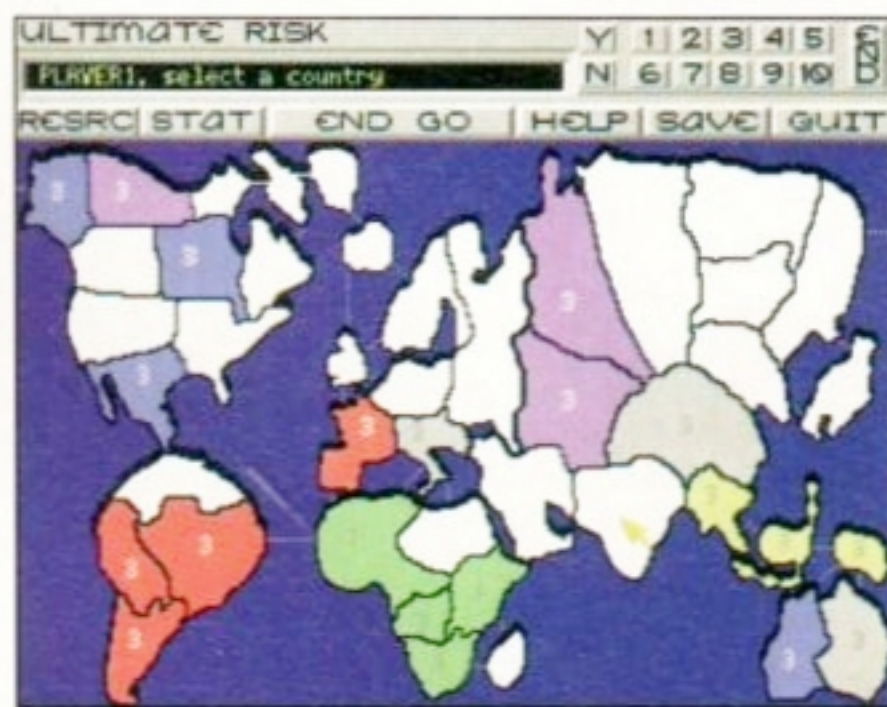


Oh goodness me. Yes it really is as complicated and awkward as it looks!

GAME: **ULTIMATE RISK**
AUTHOR: **RICHARD BENWELL**
LANGUAGE: **AMOS**

Despite the fact that this game could never be commercially released under its current title (without consulting Hasbro, anyway), here's a rather splendid *Risk* game. Oh surely you know the board game? Conquering the world and all that? Anyway, what's so good about Richard's effort is the fact that the computer players aren't half bad (they're not superb, but they're not half bad). That and the fact that there's a lot of the game you can alter to suit. You don't

want to play missions? Fine. You want to select your starting territories? Fine. Possibly the only criticism that could be levelled at the game is the fact that the continents aren't coloured - it can get confusing when you can't remember if Greenland's part of



Selecting countries at the start of a game. I'm going to make Australia my powerbase, so beware...

Europe or North America. I can understand why Richard hasn't coloured them in (countries become filled with the colour of the army of whoever owns them) but surely there must have been a way round this?

Apart from this little niggle, *Ultimate Risk* is a most excellent game and easily worthy of this month's £50 prize. As it stands it's about as good as the versions of *Risk* that were released on the Amiga by Hasbro a few years back.



...a classic tactic that's working rather well. Once purple's out of the game, I'll be unstoppable.

VERDICT: A SUPERB VERSION OF THE BOARD GAME WITH ALL THE EXPECTED FEATURES AND A FEW MORE BESIDES. A BIT MORE POLISH WOULDN'T GO AMISS (BETTER MENUS AND SO ON) BUT ONLY COSMETIC CHANGES ARE NEEDED BECAUSE IT PLAYS JUST FINE.

**£50
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Buy your weapons wisely and with thought.



What you can't tell from this picture is just how fast your character is spinning round. Splendid stuff.



Up in the trees fighting baddies. Quicksilva may not be original but the speed helps make it so playable.

GAME: **QUICKSILVA**
 AUTHOR: **MATTHEW COTTINGTON**
 LANGUAGE: **UNKNOWN**

It's *Sonic*, but on the Amiga. No, it really is. And with weapons too. There's a large variety of weapons as well and they're purchased from the armoury at the start of the game. The idea is to simply rush around the platforms collecting as many coins as you possibly can - get the required amount and you can then seek out a teleporter to take you to the next stage.

The levels are huge but the simple most impressive thing about *Quicksilva* is the sheer speed of the game. It's incredible! Your character goes flying round the screen like nothing seen before, collecting bits of fruit and coins, all the while shooting and blasting the hundreds of enemies that populate each level.

Quicksilva really is a marvel of a game, as a full-blown commercial release it would receive a very good review not only because it's so technically impressive but because it's such fun to play as well.



Even if you've run out of ammo you can resort to leaping on the baddie's heads to kill 'em.



Well, this cow's mad obviously. Mad? It's absolutely livid! Well, lurid certainly. We like silly intro screens.

Nothing's too difficult but there's so much of it you can't help just wanting to keep playing to explore some more. It's very easy to pick up and play and when you're doing that you can't stop having fun as well. Really excellent stuff. And because we're such wonderful people we've included a demo of *Quicksilva* on this month's CD so you can have a go at this splendid game yourselves. Hurrah for us! **AF**

VERDICT: ANY SUGGESTIONS I GIVE HERE TO IMPROVE THE GAMEPLAY WOULD BE NIT-PICKING AS *QUICKSILVA* IS GREAT AS IT IS. FAST ACTION AND SIMPLE GAMEPLAY MAKE THIS A JOY TO PLAY. LET'S HOPE MATTHEW TURNS HIS TALENTS TO SOMETHING NEW VERY SOON.

GAME: **BLASTED**
 AUTHOR: **BEN PARKER**
 LANGUAGE: **UNKNOWN**

Despite this being one of the more 'simple' games this month - by simple we mean the game mechanics - it's one of the more polished. You control this small catapult at the



Power ups are available, here you've got yourself a cannon thing which fires faster than the normal gun.



The laser is the weapon of choice. Anything flying into its beam is automatically cooked to a cinder.

base of the screen which you move from left to right while firing at the pigeons that rush across the screen. If you manage to score enough hits you'll reach the percentage required to move onto the next wave. It's as simple as that really.

Well, it's a little more complicated, because the pigeons fight back by dropping dollops of green goo at you. Should one hit you then you're unable to fire for a while. You're also prohibited from firing when you happen to hit some of the Red Cross pigeons (they're green for some reason best known to Ben). Hit pigeons do have a tendency to drop power-ups however so it's worth collecting them when you get the chance.

Blasted is a very simple idea and although it looks great and has been very well implemented the biggest problem is the fact that it runs too fast. The pigeons race across



Shuffle left and right, keep firing and mind the falling blobs of erm, gunk.

the screen at break-neck speed which inevitably means you simply stay in the middle of the screen and shoot. If there was more chance to actually aim at the targets the game would be more fun. The pigeons don't need to be slowed down a huge amount, but as it stands it's just too much of a lottery whether you actually hit anything or not. **AF**

VERDICT: VERY WELL PUT TOGETHER BUT UNFORTUNATELY JUST A TAD TOO FAST TO MAKE IT AS MUCH FUN TO PLAY AS IT OBVIOUSLY COULD BE. PROOF POSITIVE THAT EVEN SIMPLE IDEAS NEED TO BE PROPERLY IMPLEMENTED IF THEY'RE GOING TO WORK AS THEY SHOULD.

GAME: PLUNDER
AUTHOR: NICK CHAPMAN
LANGUAGE: UNKNOWN

Not everything this month can be an absolute cracker and this one certainly isn't. It's a sideways scrolling hack-em-up in the *Shadow of the Beast* mould. Or at least it would be if it was any good. At all.

To kick off, all your character can do is move left and right and chop with his axe.



Our horned hero goes chop, chop, chop at some baddie types who, when hit, simply fall off the bottom of the screen. Ho hum.

Although it's not really a chop at all it's more a kind of rabbit punch, and you can only hit enemies that are about three pixels away.

Talking of enemies, well frankly, they're a bit of a joke. They look alright (hardly brilliant, but passable) but all they do is walk towards you. Then you rabbit punch 'em, sorry, wield your mighty axe and chop 'em asunder. No, you rabbit punch 'em. Oh, but some of them fire arrows and things at you. Unless you walk towards them and hack 'em down first.

Apparently you have three lives. But contact with any of the baddies causes almost instant death. You can be chopping away quite merrily (standing on the spot because there are just too many of the baddies to risk moving right), and suddenly you're down to one life. Two seconds later, the game's over and you have to do it all over again.

Everything is wrong with this game. Satisfying gameplay does not involve trying to move right one inch at a time while you continually keep pressing the fire



Here our horned hero goes chop, chop, chop at some chaps with bows and arrows. Not that they're much good at firing them mind.

button. Even with the autofire on and your finger held on the fire button you'd be hard pushed to find this entertaining.

VERDICT: A VERY POOR ATTEMPT TO CREATE A HACK-EM-UP. THIS IS NO FUN TO PLAY AND HAS ALMOST NO REDEEMING QUALITIES. NOT EVEN THE GRAPHICS ARE OF A PARTICULARLY HIGH STANDARD SO THERE'S NO COMFORT TO BE GAINED FROM JUST WATCHING THE THING. POOR. VERY POOR.

GAME: ROAD RAGE
AUTHOR: BARNABY BYRNE
LANGUAGE: AMOS PROFESSIONAL

Overhead racing games, don'cha just love 'em? Course ya do. So do we. Normally. This one's for two or three players who get to race around a selection of tracks over a definable number of laps. But oh! There's weapons to boot! Each player's car is fitted with a front-firing gun which

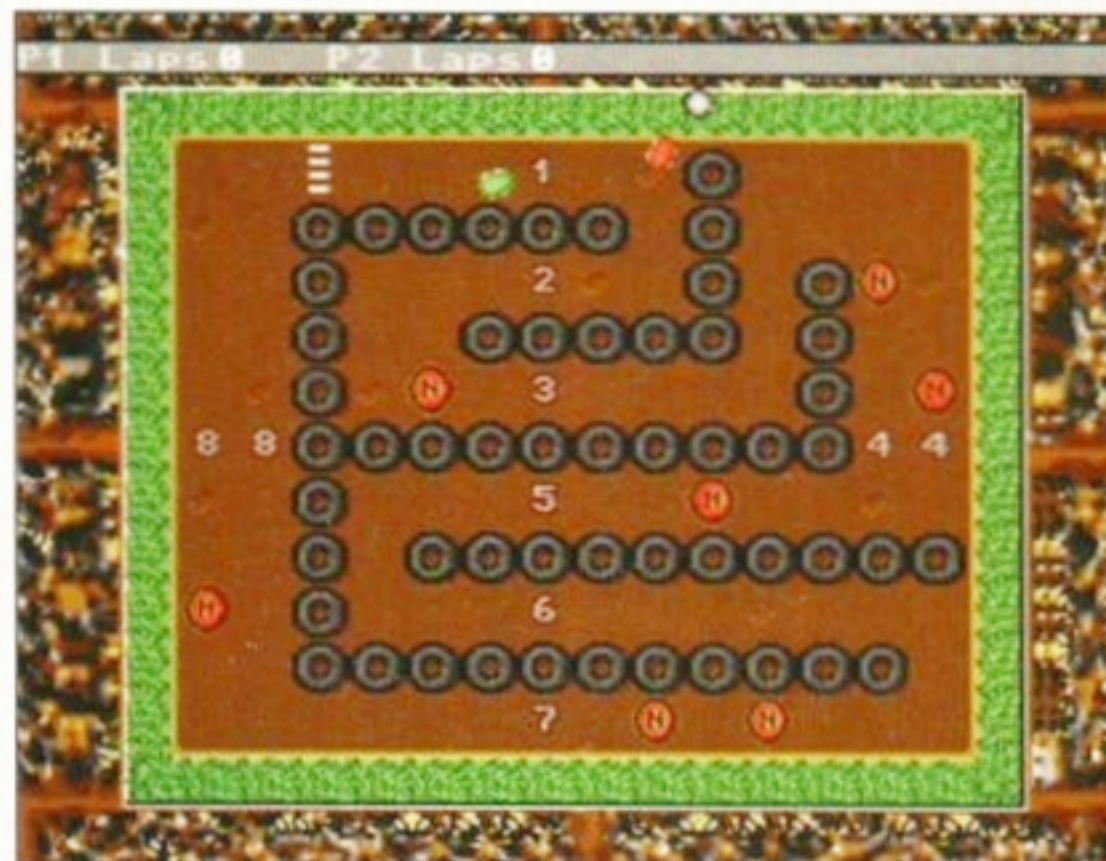


The options screen where you can alter the game's parameters. Not that you'd really want to much.

you can use to put the other player's cars in a spin when you hit 'em.

If you're wondering about the numbers on the track, then Barnaby's had the curious idea that instead of arrows pointing your way round the track you're supposed to drive over the numbers. Strange but true. The orange blobs are a small amount of boost. You simply drive over 'em and your car speeds up for a short while - unless you bash into the sides or the tyres in which case you lose your boost. The orange blobs stay on the tracks for the duration of the race so you can keep going over 'em every time you go round.

It's terribly basic this game. The graphics are less than stunning and the control of the cars is very simplistic - there's no inertia to speak of and control is basically limited to accelerate or not accelerate. That doesn't mean it's a bad thing, it just means it's a little dull. Alright, it's a lot dull. Even when you've got three players blasting around, shooting each other and generally trying hard to imagine you're playing *Micro Machines* the fun wears thin very quickly.



Drive over the numbers in the right order and drive over the red Ns for extra boost. This is about as exciting as this one gets I'm afraid.

VERDICT: IT'S ALL SO BASIC, FROM THE BORING GRAPHICS TO THE SIMPLE GAMEPLAY. EVEN IN MULTI-PLAYER MODE THERE'S LITTLE HERE TO KEEP YOU PLAYING. PERHAPS MAKING THE GAME SO THAT THE CARS REQUIRED MORE SKILL TO DRIVE WOULD IMPROVE THE GAME'S LONGEVITY.

MORE OF THE SAME PLEASE!

Every game featured in our Reader Games section wins an Epic CD and the winning entry also wins £50 from *Amiga Format* and another £50 worth of Epic CDs.

If that doesn't inspire you to get those submissions in then nothing will. Just a note of caution though: don't

bother sending in that PD game you coded three years ago just to try it on, we'll spot it and chuck it in the bin. After we've erased the disk for good measure.

And, once the game's been featured here in your favourite magazine we'll be passing them onto Epic Marketing who'll take a look at the really good ones with a

view to publishing them. There's nothing guaranteed but you never know - you might just get a phone call in a couple of months time. Please make sure you put a contact number or address on your submission (which you'll need to do anyway, or we wouldn't know where to send the goodies now would we?).

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SIMON THE SORCEROR



"Hello mate, you look like you've had better days". Simon learns how to win friends.



'Walking to' somewhere. A habit often practiced in the narrow cobbled streets of Bath.



More 'walking to'. A habit often practiced in the countryside around the beautiful city of Bath.

We get loads of letters every month asking for help with some of the older adventure games, and this classic keeps cropping up. Luke Sykes from Hull kindly sent us the whole solution so we decided the only thing to do is to print it. Enjoy, it's here for you...

Once inside the cottage read Calypso's note. Examine everything. On opening the drawer you will find a

pair of scissors, take them. Look on the fridge and take the magnet.

Going outside, make towards the compost heap behind the cottage. Go back towards the front of the cottage and head right. You'll find yourself at the Blacksmith's. Near the barrel you'll see a rope; take it.

Pick the clapper up off the table. Now head right, you'll see a dodgy geezer but don't talk to him just yet. Go left towards a cottage and pick



No, look! I know the party's here! I've been there before and anyway she gave me a map to follow. Look, over the mountains, through the valleys and fourth cave on the left.

HELPING HANDS

KINGS QUEST V
Help chaps. I'm stuck in a temple in the desert in King's Quest V. I'm waiting for some bandits to appear but they seem to be a bit shy, what am I doing wrong?
Frog of Hampshire

Don't worry Frog mate. Use the staff to enter the temple but don't worry about the treasure, look for the bottle and the coin by the door. Grab both of these and get out of there pronto! Then head south and take the water before heading east (eight times). That should help you along a bit.

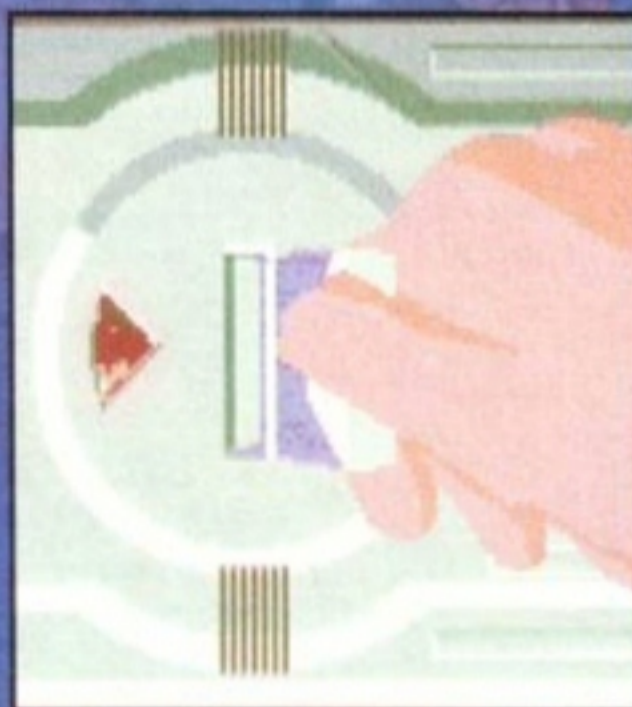
FLASHBACK
I've been playing Flashback for years but am still hopeless at it. Got any help?
John Byrne
Gibraltar

Always glad to help John. Here's a list of level codes



Easy option:
BACK
LOUP
CINE
GOOD
SPIZ
BIOS
HALL

Normal option:
PLAY
TOIT
ZAPP
LYNX
SCSI
GARY
PONT



Difficult option:
CLOP
CARA
CALE
FONT
HASH
FIBO
TIPS

INDIANA JONES AND THE FATE OF ATLANTIS
Please help. I have been stuck in Indiana Jones and the Fate of Atlantis for ages. I'm at the bit where I've come across Sophia but she won't budge! What next?
Robert Howard
Leeds

up the ladder. Go into the cottage. At the top of the stairs collect a specimen jar.

On your way out of the cottage, pick up the cold remedy found near the door. Once outside, head left towards the cottage with the bees outside. Remember to examine everything. Now go back towards the dodgy geezer. Walk right to the shop and have a look inside.

Now go right to the drunken Druid and go inside. It is important to look at everything and talk to everyone. On looking at the fruit machine you will discover some matches which you'll need to take. Speak to the wizards which can be found by walking right. To find out your quest tell them: "You'll do anything to be a wizard". Walk left, talk to the barman and watch his actions when you ask for a drink. Now go outside and head left to go out of the village.

Walking left you will find three paths. Take the bottom right path to the fallen tree stump. Try to go down, the tree stump will talk to you, try to go down again and you'll find yourself talking to Woodworm.

Walk down and walk left to the witch's cottage. Look at the well and move the handle. Pick up the bucket of water. Go inside the cottage and take the broom. If the witch should throw you out, go back inside and she'll challenge you to a fight. Walk right to go back towards the tree stump. Continue right until you reach the Troll. Ask him if you can cross the bridge. Talk to the goat and then go back left until you are at the three paths again.

Now take the middle path to the right. You will find a Barbarian. Talk to him and ask "What's the problem?", and then help him. He will give you a whistle. Walking right you will come to four paths. Take the first right to find Bard playing music. When you have talked, Simon will head back to the four paths. Use the top right path to find a hole. Look at the sign and

talk to the hole. Doctor Von Jones will answer. Walk right to the centre of the forest and head up your nearest stairs. You will find some doors. On the floor is some paper. Pick it up and look at it.

Go back to the centre of the forest and try to go into the Dwarf Mine. To do so you will need a beard. Look at the rock and pick it up. Using the map, go back to the village. Go into the shop and give the shopkeeper the shopping list. Now go right to the pub and ask the barman for a drink, while he is busy use the scissors on the dwarf. Use the map to go back to the centre of the forest. Wear the beard outside the Dwarf Mine and use the password 'Beer' to go in. Talk to everyone and go down the cellar to find the drunken dwarves. Examine everything.

Go back outside and remember to remove your beard. Walk right until you find the woodcutter. Talk to him and take the metal detector he offers you. Walk right to the gorge, now go right, then left, left back to the centre of the forest. Go up the steps to the right and go into the cave entrance. Walk right until you see a door, open it.

Go inside and talk to the character, consume the first bowl of stew. Ask him for another bowlful. Use the specimen jar with the stew. Ask for another bowlful and consume the stew. When he has gone look at everything. Move the chest, open the trapdoor and go down the ladder. Walk right and go back up the ladder. Leave the house. Walk right and use your metal detector. Carry on right until you come across the giant, talk to him. Now use the map to get to the Troll bridge and tell the Troll that you'll get him some goat.

Pick up the placard and walk right to the three paths. Take the bottom right path and continue right until you meet a crossroads. Go right and use the bottom path. You will come across a bell, use the



clapper with the bell and move the bell. Now use the hair to climb up the tower where you will meet the Repulser. Tell her you have come to rescue her and kiss her. Pick up Repulser and again use hair to climb down. Walk left to the crossroads and take the top path. You will see some vines, climb down them. You will meet Golum who you can give the stew to.

After using the map to take you back to the village, go through the Arch. On the left you will see the dodgy geezer who will talk to you. You should look at what he has, but tell him you're not interested. Go through the arch and left, back to the cottage with the bees outside. Use the Repulser on the door. Go inside and look at everything. Pick up the hat and the smokebox. Outside again, make towards the beehive where you should use the smokebox and then take the wax. Now go into the pub and ask the barman for a drink. While he is busy, put the wax into

This is what Nick says to every freelancer. Of course, none of them believe him anymore.

Ben visits Linda's house and is shocked to discover she's been living in poverty all these years, despite coming to work in all the latest D & G trendy clothes.

Continued overleaf →



Take the machine part to the canal, feed the octopus the trapped crab (which you got when you used the bread and cold cuts in the rib cage to trap the crab) and stick a bead in the mouth of the raft. Float left down the canal, opening the gates with the appropriate stone. The steps three screens away lead to the crescent shaped gear and an open cupboard.

Close the cupboard and take a look at the inscription - this is very important because it refers to the Sentry statue guarding the inner ring of Atlantis - the moon representing the crescent shaped gear, the star the bronze gear and the circle the bronze spoked wheel and machine part. Continue left along the canal to the Sentry statue and use the ladder to examine his chest plate. You want the statue to move its left hand (to your right) to release the chain, so place the wheel, machine part and gears as according to the inscription and pop a bead in the hole.

Use the left chain with the left bronze hoop and active the statue to move his right hand (to your left) to open the door. Use the hinge pin to rescue Sophia.



Indy was adjusting well to his new role of MOT inspector. Next week's lesson: turning the ignition key.

F18-INTERCEPTOR

I recently started playing a very old game called F18-Interceptor. I enjoy the game but can't get past mission six where I have to destroy the carrier. What am I doing wrong?

Mr Barker
Gt Yarmouth

Blimey, this is an oldie. Our memories are not perfect but as far as we recall you can't actually destroy the carrier on this mission. Try going after the sub instead - you should be able to get further following that!

LEND A HAND

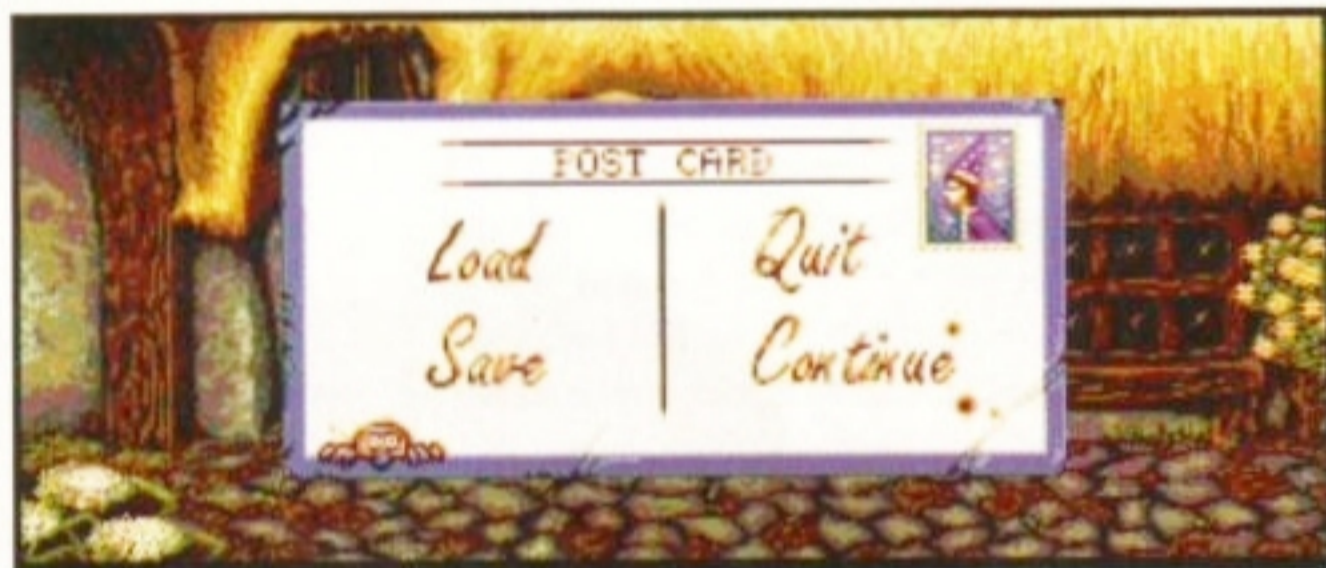
If you're having trouble with a particular game or have a solution to a question in the magazine, don't keep it to yourself, write it down or send it in on a disk and we'll do our best to print it.

HELPING HANDS

Amiga Format • 30 Monmouth Street
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Derek the dwarf was known throughout the area for his frankness. And his brevity. He wasn't often asked to come down the pub though.



Andrea's idea of a funny thing to send back to the office after a week in Rhyl. Actually, this is the funniest thing in Rhyl. I've been there, I should know.

← the beer barrel situated behind him. He'll give you a voucher in a mo'. Walk outside and collect the beer, go to the centre of the forest. Wear the beard to go into the Dwarf Mine. You will find a dwarf with a spear. Offer him a bribe or simply give him the beer.

Walk back up the stairs, go past the dwarf at the table and enter the mine. Go to the door and you will see a hook which you should pick up. Try the door and talk to the dwarves. Leave the mine and remove your beard. Keep walking left to the four paths. There you should take the top left path. You will come to the stone table. Now walk right back to the four paths. Go left and left again, you will find a wise owl. On talking to him he'll lose a feather which you can take.

Go the the Troll bridge. Going right you will see the three paths again. Take the middle path to the right. Continue over the bridge and you will meet an Oaf. Talk to him and ask him about beans. Simon will walk away after watering the beans. Go back and look at the beans, and pick them up. Go to the centre of the forest. Put on the beard and go into the Dwarf Mine. Go down to the drunken dwarves and use the feathers on the fat dwarf lying on his back. Get

the key and head upstairs. Enter the mine. Use the key on the door, go in and say to the dwarf: "I've come to make you an offer" (and it's in the inventory). Give him the beer voucher, saying: "Pah! Think nothing of it". He should reward you.

Go to the village and through the archway to the dodgy geezer. Give him the gem, making sure he doesn't rip you off. Now go to Calypso's cottage and use the beans in the compost. Pick up the watermelon. Go to the front of the cottage, go right and then straight up behind the Blacksmith's cottage. Go left and open the box. Look at the empty boxes. Pick and look at the spell book. Take the rat bone, use the paper on the door and the rat bone in the lock. Pick up the paper and use the key in the lock. Walk out, take the bucket and go down stairs.

Go down to the drunken dwarves and use the feathers on the fat dwarf lying on his back

Take the mints. Pick up the Flaming Brand and open the Iron Maiden, talk to the Druid, remove the ring and talk again. Use the bucket and Flaming Brand on the Druid. Quickly get into the Iron Maiden. Open the Iron Maiden, go to the frog and get the hacksaw which you should use on the bars. Go back to the village and to the shop and pick up the hammer. Going out of the shop, walk left, right, taking the middle path. Walk right and go first right. Use the watermelon on the sousaphone. Go to the centre of the forest and up the steps to the right. Walk into the cave entrance.

Go right, into the house. Walk to the ladder, use hammer on the plank. Go to Scull island and take the Frogsbane. Walk back to the ladder. Continue right and use the sousaphone. Enter the cave, remembering to read the sign. In the cave, give the cold remedy to the Dragon. Go back inside, pick up the fire extinguisher.

Go outside and look at the boulder, using the hook with the boulder (by clicking on the boulder). Simon will climb up. Walk to the hole. By using the rope with the magnet and then using them with the hole you can collect gold pieces - you need 48 of 'em. Walk behind the cave and look at the rock. Go to the village and walk through the middle archway. Use the rock on the anvil. Go into the shop and pick up the white spirit. Leaving the shop, walk back through the archway and into the house. Give the Frogsbane to the frog. Go back through arch to the hole. Talk to the hole and give the fossil to the hole. Enter the cave and go right until you see the hole. Look at the dirt



Amiga Format staff members enjoy an evening of Live Action Role Playing. Unfortunately the other team didn't turn up because they'd gone to a more popular pub.

and take the Milrith Ore which you can use with the anvil on going back to the village. Go back to the centre of the forest, talk to the Woodcutter. Enter his house and take the climbing pin. Use the fire extinguisher with the fireplace. Move the hook and pick up the mahogany. Walk back to the fireplace to leave, go find the tree stump. Talk to the stump and go to the crossroads.

Take the bottom right path and use the hair. Look at the floorboards and use the woodworm with them. Use the ladder with the hole. Open the tomb and go inside. Open the tomb again, pick up the loose bandage and the staff. Go to the pub, into the back room, give the wizard's the staff and pay them. Now go to the Dragon's cave. Behind it you will find icy ledges below the climbing pins. Go onto them, continue right and talk to the tree. Use white spirit on the pink splodge and talk to the tree again. Go to the witch's cottage. Inside you'll find the witch. Challenge her to a fight. Keep trying the magic words on her until you win. She'll turn into a dragon. Say "Abracadabra" turning her into a mouse. Click on the mouse hole and escape.

The end is near...

Go into the Dragon's cave, walk behind it and use the climbing pin in the hole. Walk right and talk to the snowman. Consume the mints and walk up the steps. Now go to the Tower of Doom and walk to the door. Use the broom and consume the potion. Pick up the leaf, look at the bucket and pick up the stone. Go left and use the hair with the tap. Pick up the lily leaf and use a matchstick with it. Use the lily leaf with the matchstick to make a sail.

Sail to the seeds and take them. Use the stone with the seeds. Use the oil on the tap. Move the hair and sail to the puddle centre. Talk to the frog and walk to him. Look at the edge of the water and pick up the tadpole. Talk to the frog. Consume the mushroom. Open the door and go inside. Pick up the branch and go back and use it on the chest. Pick up the shield and the spear. Go down the spiral staircase. Move the lever. Pick up the chest and use it on the block. Move the lever again and take the candles. Use the spear on the skull and pick it up. Go upstairs to the bedroom. Take the magic wand and talk to the mirror. Look at the book. Take the pouch and use the sock in it. Use the pouch with the hole.

Go upstairs, look at and take the book and the chemicals. Use the chemicals on the shield and the shield on the hook. Talk to the Demons, and talk again telling them you can send them back to Hell. Ask their names and draw a square on the floor. Go down and talk to the mirror asking to see the lab. Go back to the Demons. Talk and send them back to Hell. Go into the teleporter and go to Rondor. Talk to the attendant, look at the brochures. Use the elastic band with the sapling. Pick up the pebble. Use the catapult with the bell, walk to the pits and across the bridge. Pick up the floor wax. Use the wand on Sordid. Go back to the counter. Take the matches (found on the right). Go back to Sordid and use the matches on the pits. Use the wand in lava. Now go back to Sordid and use the floor wax with Sordid. Hurrah! You've just completed the game!

SYNDICATE

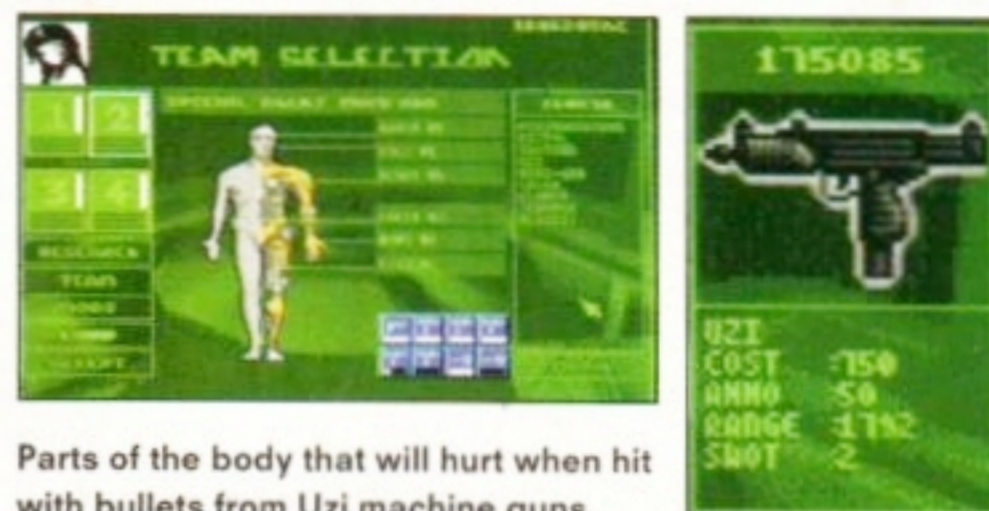
I have discovered a brilliant cheat for Bullfrog's superb game:

1. Start the game as normal.
2. When the main menu appears, click on Configure Company.
3. Enter your company's name as MARK'S TEAM
4. Click on ACCEPT.
5. Click on BEGIN MISSION.
6. Now you will be able to choose any territory. Then click on BRIEF.
7. Now go through the briefing screens and you will have 1,000,000 in your budget.
8. Not only will all your agents have V3 mods but the Cryo Chamber will be overflowing with agents and you will be able to buy all the equipment and mods.
9. Now equip yourself and start the mission!

Patrick Harrison
Doncaster



The Goths are coming! After a particularly depressing gig, the Moodies go on the rampage.



Parts of the body that will hurt when hit with bullets from Uzi machine guns.

SENSIBLE WORLD OF SOCCER 95/96



Yeboah. Incredible talent, undeniably. Blackburn Rovers are missing the chap at the moment.



Yeboah. Incredible talent, undeniably. Leeds are missing the chap. The right caption here is wrong.

I believe I've found a top cheat for this game which enables you to score a goal whenever you want (well, almost anyway).

The method is simple: send the ball directly towards the opponent's goal and before another player intercepts it, press the R key for a replay. Before the replay finishes press and hold down the fire button. When you do this the

replay will be stopped, you will go back to the game except for the fact that all of the players will stop and the ball will have a free run into the back of the net. It is even possible to do this directly from the kick off (if the pitch isn't too slow).

Ian Parkhouse
Dereham

COLONIZATION



When you build a colony, name it Charlotte (capital C) and you should find you have 50,000 gold in your treasury. You will also have the map fully discovered and will have access to every European Power's reports.

Glenn Harden
Norwich

The people of Jamestown were very happy with the wide streets afforded them by the local council planners.

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CU Amiga: 91% AUI: 93%

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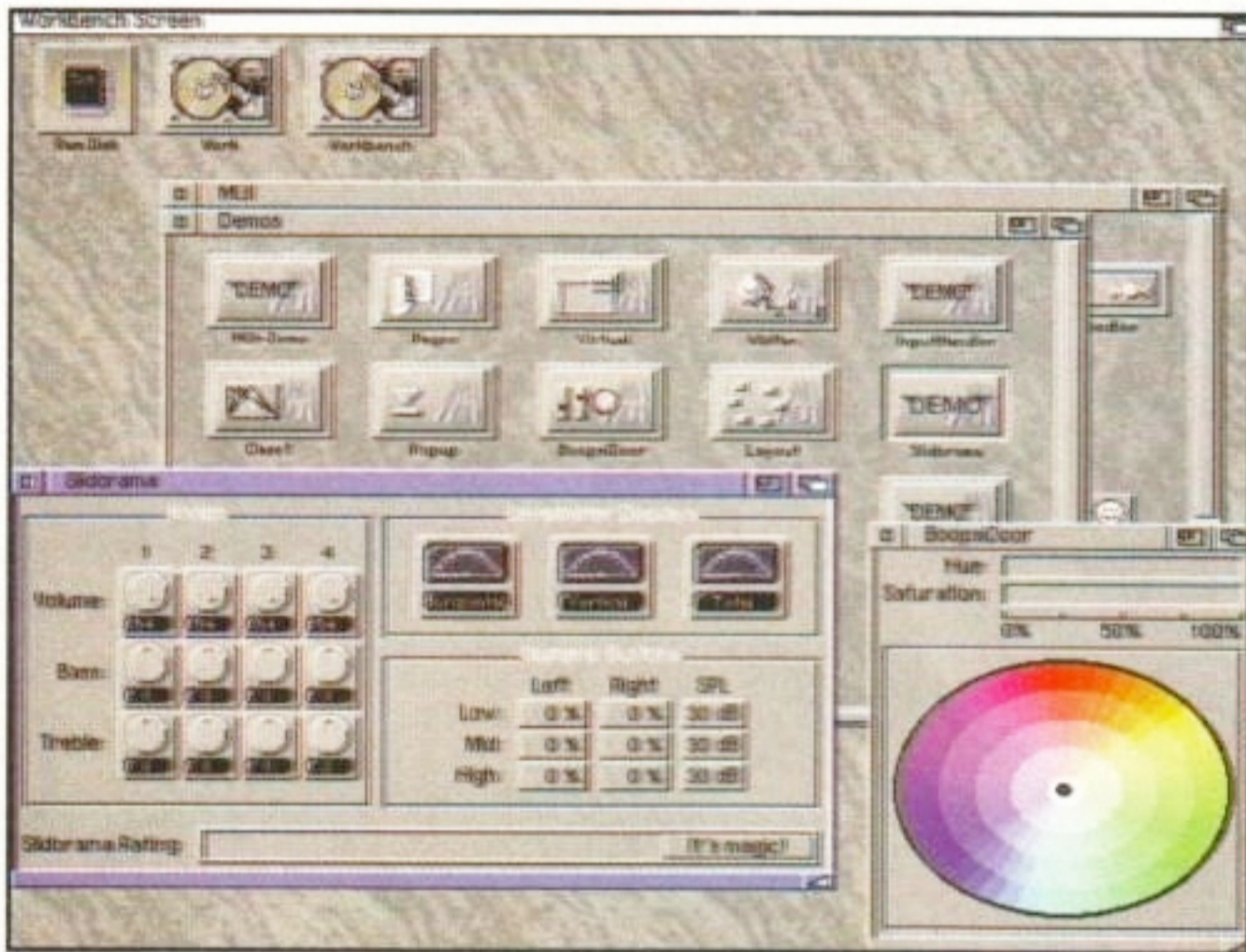
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MUI 3.6

Utility

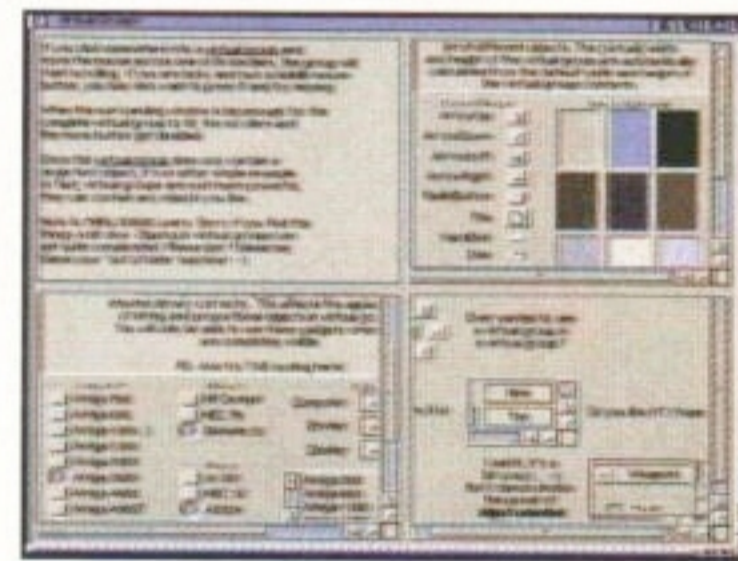
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MUI 3.6: Easy-to-use and very flexible, MUI is becoming increasingly popular with Amiga users.



Loads of utilities these days require MUI and it's getting a cult-like following in the Amiga community due to its flexibility and ease of use.

If you haven't heard of MUI then you're probably wondering what it does. The author describes it as "an object oriented system to create and maintain graphical user interfaces". Basically that means it's a quick and easy way for programmers to add interfaces to their software.



MUI 3.6: Version 3.6 comes with example programs and an AmigaGuide, making your life even easier.

So how does this benefit the user? Well, the interfaces are fully font sensitive and, once you register, you can configure practically any aspect of them, from the window backgrounds to how the buttons look. You could even create an interface that matches the looks of Windows 95 (if you really wanted to!).

There is an excellent editor allowing you to change the way the interface looks. This has more options than I can list here, but unless you register only the basic ones can be used. There are presets included for use with MagicWB and one for people who use a large screenmode.

There are various demo programs and scripts, and a comprehensive AmigaGuide document. Also included are snapshots of the program running, some material for programmers, ARexx scripts and even a selection of adverts for other SASG products (The Standardised Amiga Shareware Group).

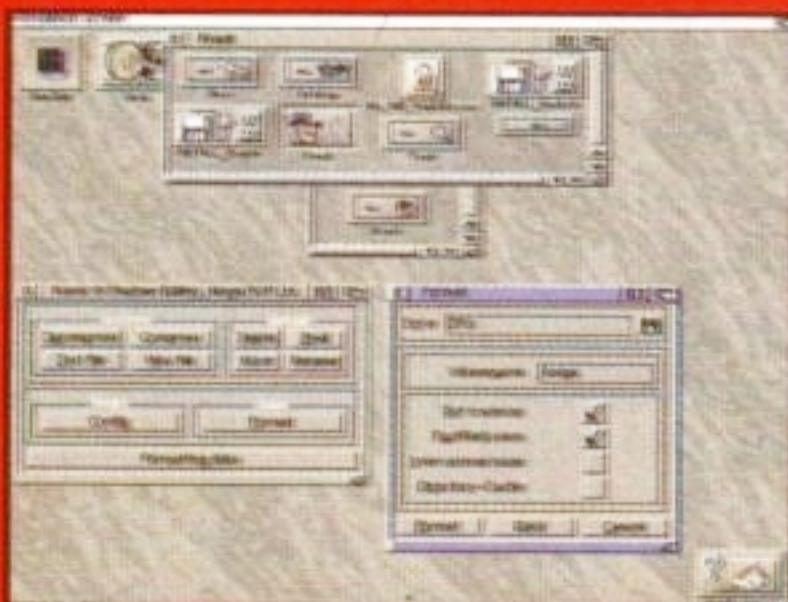
PD selection of the month

THE KNACK

Utility

ByStephan Bulling
 WareShareware
 PD Library.....Classic Amiga Software
 No of disksOne
 Price£1

This little MUI application is one of the ever growing selection of life-saving archiver front ends. Usually they have drawbacks, such as lack of support for certain packers or some fall in their ease-of-use. But *The Knack* manages to cover all



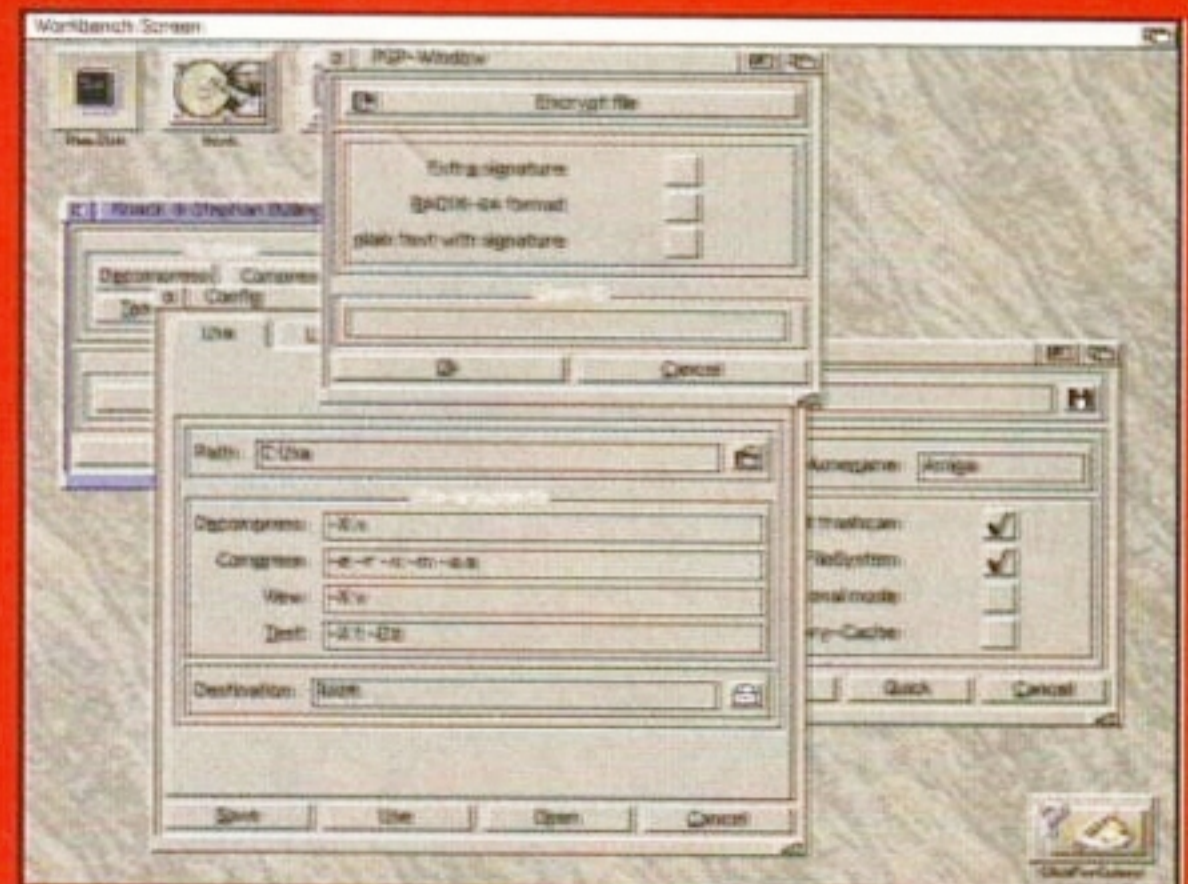
The Knack supports the three main archivers - LHa, LZX and DMS...

that you would expect and more, and is possibly the most comprehensive package of its kind.

It supports the three main archivers: LHa, LZX and DMS, has a format utility, and even encryption options. The interface uses MUI so is clear, font sensitive and fast in use. It is made up of three main windows: The main button bank, format requester and configuration. You perform the archive functions in the main bank using ASL file requesters that appear if you want to unpack, pack, test or view an archive. The format requester contains all the usual buttons, such as FFS and International, and finally the configuration tells the program where to look for the archivers and which directories to use.

There are versions of each archiver included, so it is 'ready to go'.

Unfortunately I couldn't find English documentation on the disk, but this should be seen to once you register. This is an excellent package that deserves to earn the author registration fees and one I can recommend to all. Even hardened Shell users will be able to appreciate this.



...it also has a format utility and even encryption options. Very simple to use and set-up ready to go.

I can't recommend this more, it is an exceptional package that deserves to be on every Amiga.

ART EFFEX

Kids Art Package

ByAsa Margetts
 WareLicenceware
 PD LibraryArrow PD
 No of disksOne
 Price£3.99

This licenceware offering is an art package for kids. It has a bright, colourful and easy-to-use interface yet doesn't fall down on features.

The program is controlled through either the mouse or keyboard (or both), and operates in much the same way as any other bitmap drawing package. There is a large panel of buttons at the bottom of the screen allowing you to access many sub-menus. There are features like sound, stamps (Inbuilt brushes) and the disk menu. The stamps are of particular use to children who are unable to draw complete pictures, and they provide colourful cartoons to spruce up those masterpieces.

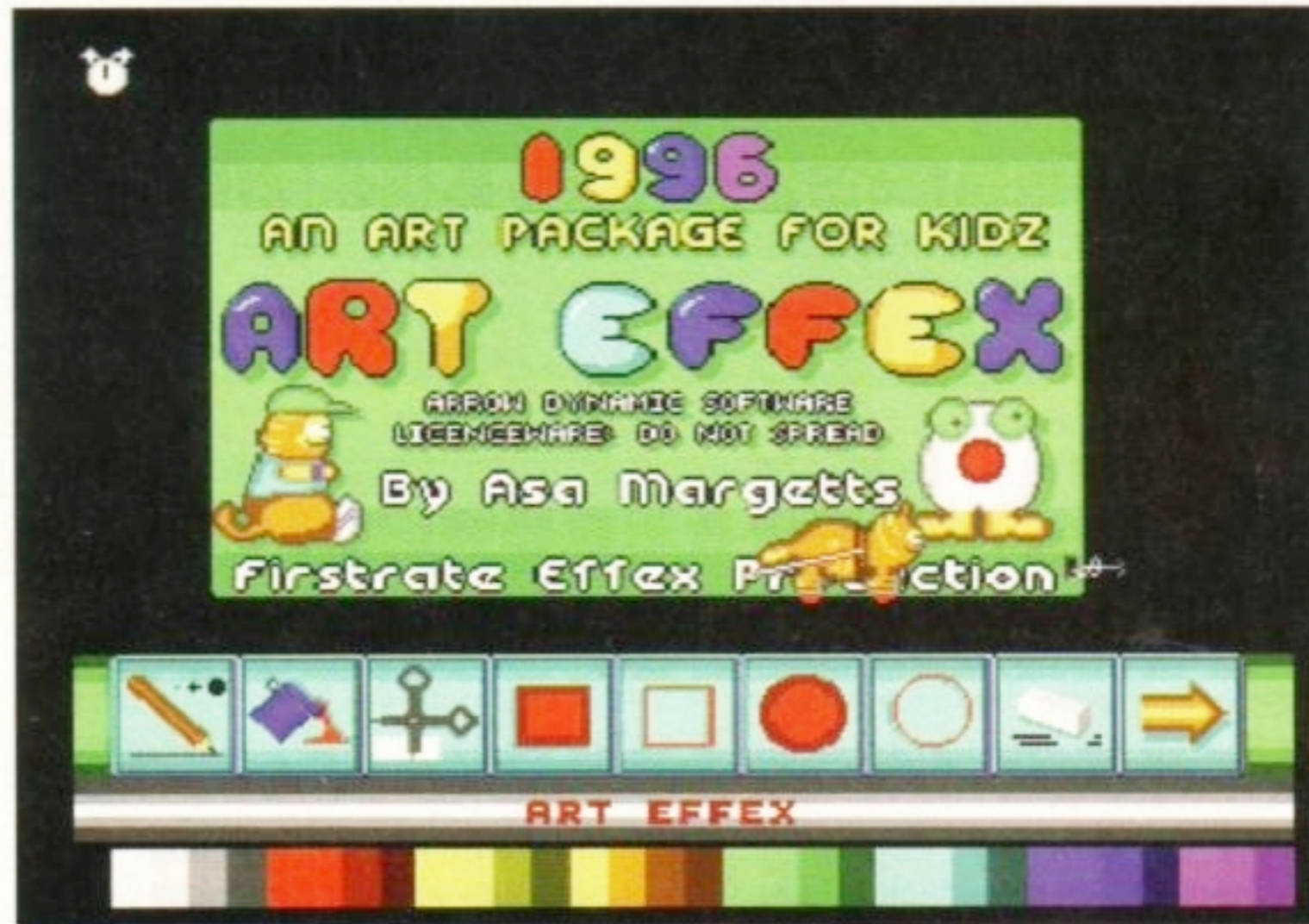
It's hard to fault this - it's exceptionally fast and even has online help as you move the pointer over the icons. It is quite simplistic, but then this is good in a children's package.

I recommend this to anyone who has kids who don't have a similar package. For £3.99 you can't go wrong and if you still aren't convinced then there is a demo version available for just 75p.

THE CLASSIC GUIDE TO AVOIDING COLDS & FLU

AmigaGuide

ByClassic Amiga Software
 WareFreeware
 PD Library..Classic Amiga Software
 No of disksOne
 Price£1.00

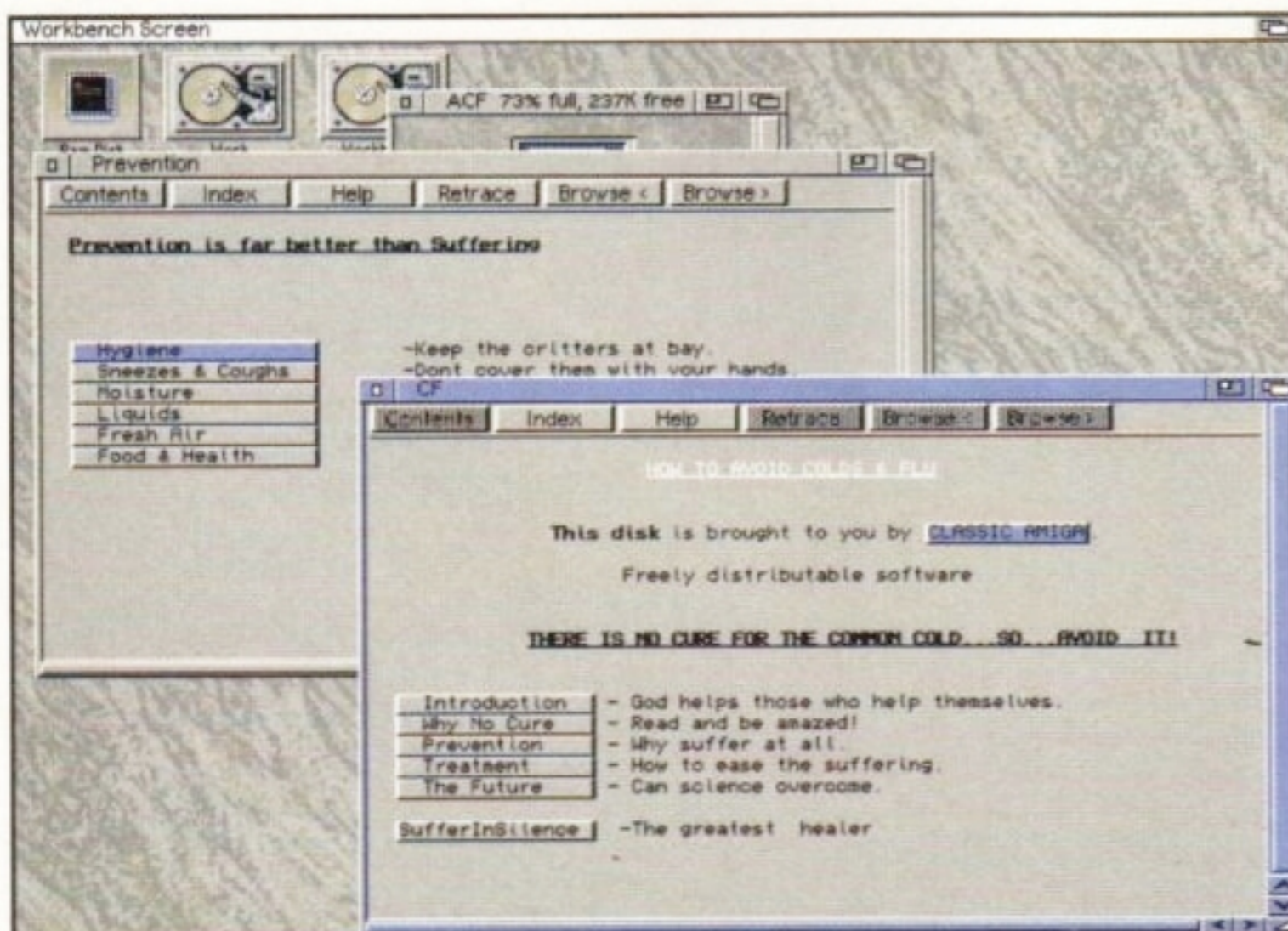


ART EFFEX: It may be a bit simplistic but that is often a good thing in a package aimed for kids - even if your child is a budding Picasso.

Achooo! Winter is here again and with it the inevitable rush of colds and flu. If, like me, the damn things seem to attract to you like magnets then *The Classic Guide to avoiding Colds and Flu* may be of interest.

The disk contains an AmigaGuide document which attempts to clue you up on everything you wanted to know about the little bugs. There's a scientific exploration of colds and flu explaining why there is no cure but the most interesting and useful section concerns prevention. Learn how living a healthy life stops the fiend (is he implying I'm unhealthy then?). Treatment follows and then finally a section concerning possible future developments.

The most novel part of the guide for me was the button named "Suffer In Silence - The Greatest Healer". It takes you into the classic *Amoeba Invaders* game for getting rid of those sniffing blues. This package is pretty useless after you've read everything, but it is nice to see something original and not just another clone.



COLDS AND FLU: Once you've read through all the sections, discovered about the history of colds and flu, how to cure it and what you can do to prevent it...



ART EFFEX: As you can see...



ART EFFEX: ...even complete idiots...



ART EFFEX: ...are capable of producing...



ART EFFEX: ...something using Art Effex.

If you are suffering from a cold and need some help then this could make you feel better. Oh yeah - the game is wicked!

BIRTHDATE HISTORY V2.24

Utility

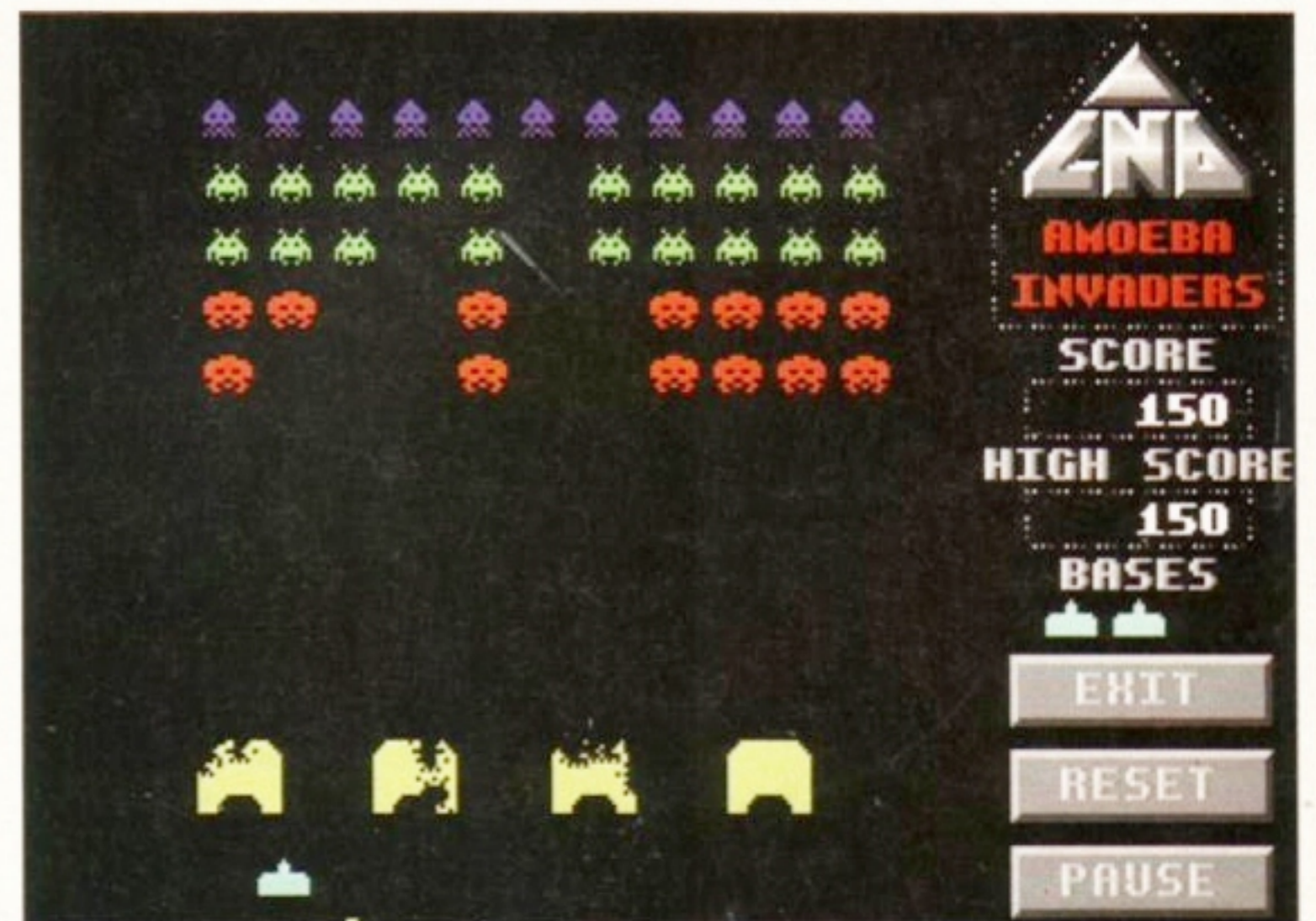
ByJohn L Devoy
 WareShareware
 PD Library.....Online PD
 No of disksOne
 Price.....75p + 75p p&p

People have always been fascinated by birth dates, particularly in the field of astrology. But people with a hatred for Russell Grant need not fear as this is much more than a simple astrology predictor.

On loading you are presented with a requester asking for your name and date of birth. You can then choose to print the information or view it on screen.

The program then tells you what happened on your birthday, events, even what your star sign means. Discover what was making the

Continued overleaf →



COLDS AND FLU: ...it's time to take your mind off the illness and get down to a serious game of space invaders.

TOP 10 PUBLIC DOMAIN TITLES

Top 10 courtesy of:
CLASSIC AMIGA SOFTWARE

11 Deansgate • Radcliffe • Manchester
• ☎ 0161 723 1638

- 1 Super Monopoly
- 2 MUI 3.6
- 3 Casino
- 4 Virus Z Latest
- 5 Amiga Beginner
- 6 How to beat the Fruit Machine
- 7 Little Office
- 8 Text Engine 4.1
- 9 XXX Calendar '97
- 10 The Knack

WHERE TO GET THE DISKS THIS MONTH

EDDIE BARRY
(BLUE ROSE GRAPHICS)

14 Tudor Brae, Donaghcloney,
Craigavon, • Co. Armagh.
BT66 7LF

ONLINE PD

1 The Cloisters • Halsall Lane
Formby • Liverpool.
L37 3PX • ☎ 01704 834335

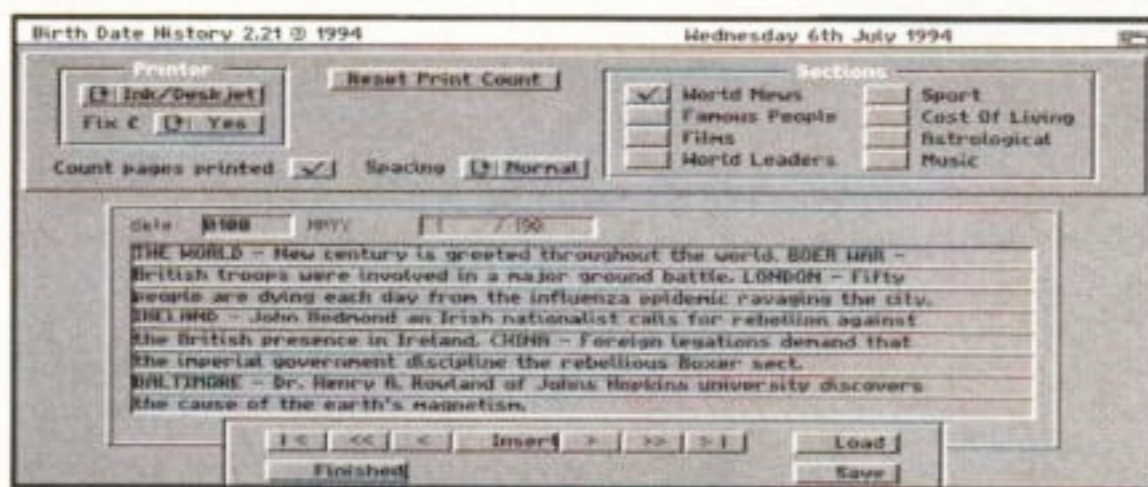
ARROW PD

PO Box 7 • Dover,
Kent • CT15 4AP

CLASSIC AMIGA SOFTWARE

11 Deansgate • Radcliffe
• ☎ 0161 723 1638

Other good PD libraries



BIRTHDATE HISTORY: Find out what other great events took place on your birthday...

BIRTHDATE HISTORY: ...and then wait for the star sign prediction.

← headlines round the world, famous people who share the same birthday, the FA Cup final result (in the year I was born Man United lost to Arsenal!), and the cost of living.

The star sign prediction follows. As always it's very broad and could apply to just about anyone. Also included with the program is an executable called BMaster.exe, an editor for the package allowing you to add your own information and extra news events or birthdates.

The package is Shareware, and can be used for 30 days before registration. Looking at the amount of data contained here a lot of work has been put into this. If you have a conscience – register.

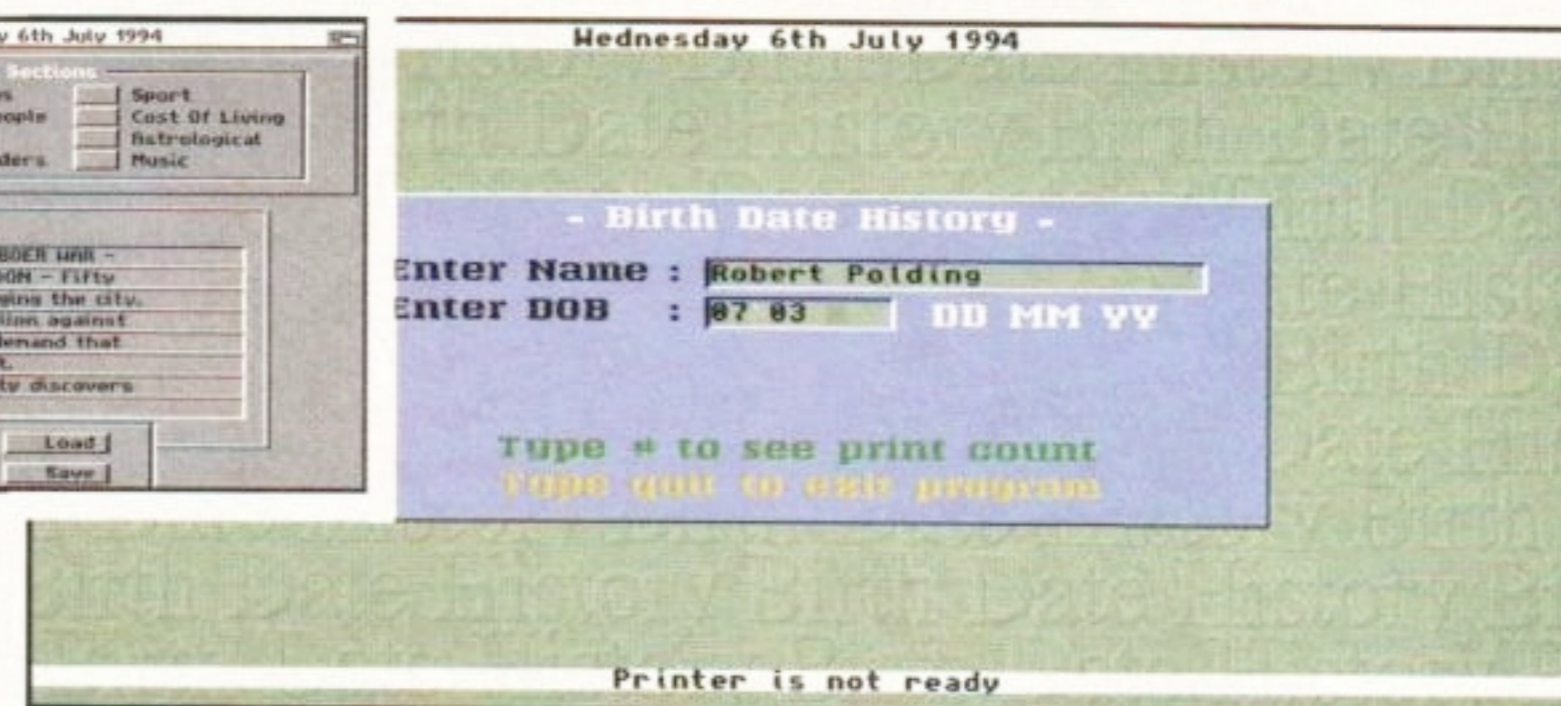
MARRYAMPIC

By.....MaVaTi WareFreeware PD Library..Classic Amiga Software No of disks.....One Price.....£1.00

Klondike AGA (a PD patience clone) has created a massive following for itself, mainly due to its stunning HAM colour graphics. But if you don't find that stimulating enough then maybe Marryampic will spark up your interest.

This is a variant on the all time classic card game Snap – we've all played it so I need not explain the rules. The biggest difference between this and playing with cards is that there are Animals under the cards, and in order to clear a pair you must select the two cards as the appropriate animal sound is played. Most of the sounds are clear and easy to recognise, but I found the lion sounded a bit like a pig. The graphics

MARRYAMPIC: Wrong! Try again and marvel at the impressive 256-colour graphics.



are excellent, especially if you have AGA or a graphics board as it uses 256 colours. The game moves along quickly enough, and comes complete with cocky messages that appear at the bottom when you go wrong.

This is a simple, no thrills, fun product, especially good fun if played with a group of people. It might even improve your memory.

BLUE ROSE GRAPHICS

By.....Eddie Barry WareLicence PD LibraryAuthor (direct) No of disks.....Three Price.....£4.00

One of the major falling points of the Colourfonts Collection (reviewed in issue 91 and also by Blue Rose

Graphics) was that it only contained a limited number of fonts. This pack is a much more useful with plenty on offer.

The disk contains a selection of colour fonts, festive clipart

BLUE ROSE GRAPHICS: Get all festive with this collection of Christmas clipart.

BLUE ROSE GRAPHICS: Themed fonts make this collection very useful for titling.



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AF SERIOUSLY AMIGA



Ben Vost

Welcome to the best reviews section in the business. As usual, this month sees us picking apart the very latest hardware and software to find out what makes it tick. It's interesting to see that Shareware authors who form the backbone of the current Amiga industry are going all commercial with Graham and Andy Dean's *DrawStudio*, a follow-up to their enormous success with *ImageStudio*.

The same criteria apply to Angela Schmidt and Patrick Ohly, authors of *MakeCD*, also reviewed this issue. Angela is probably best-known for her sterling work in compiling the *Meeting Pearls* CDs.

Of course there isn't just loads of Shareware. There's bunches of new hardware just waiting to be covered in our hallowed pages, we just don't have the room for all of it. In the coming months look out for the new SX-32 Pro module for CD³² owners from Eyeteck, Golden Image's superb eight-speed ATAPI CD-ROM drive and ACL's A1200xl accelerator card. On the software front we will have a mammoth CD round-up (we haven't done one for a while), *Personal Paint 7*, *Lightwave 5*, *TurboPrint 5* and more, more, more...

AMIGA FORMAT'S REVIEW POLICY

is very simple. *Amiga Format* is staffed by some of the most experienced Amiga users in the world and what we say goes. OK?

WHAT OUR REVIEW SCORES MEAN

- 90+% The crème de la crème. Only the very best, most versatile and effective products are awarded an *AF* Gold – the most highly prized rating there is.
- 80-89% These products are very good, but there are minor flaws or areas that could be improved upon.
- 70-79% Good products which may be worth buying, if you have a special interest in that area of computing.
- 60-69% Average products with somewhat limited features and appeal. Products in this category tend to be flawed.
- 50-59% Below average products which are unlikely to impress your mates or your wallet. Avoid.
- 40-49% Overwhelmingly poor quality products with major flaws.
- Less than 40% The absolute pits.



58

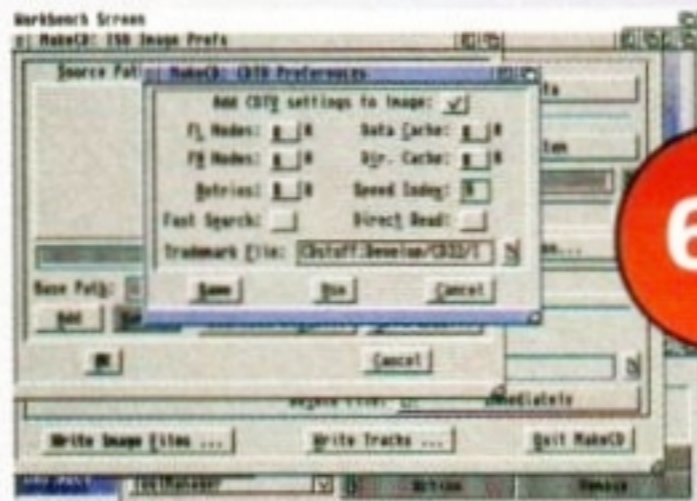
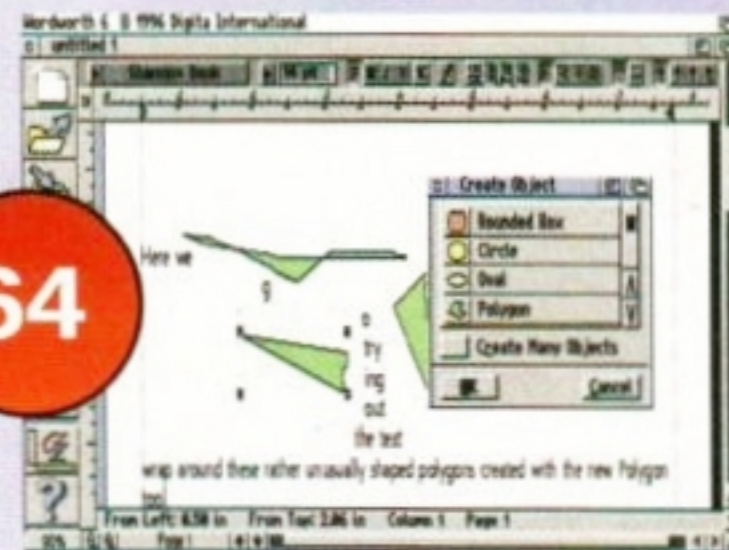
DRAWSTUDIO

The brand new structured drawing package. John Kennedy delves deep and comes up grinning.

WORDSWORTH 6 OFFICE

The latest version of *Wordworth* heads up this new complete office solution from Digita.

64



66

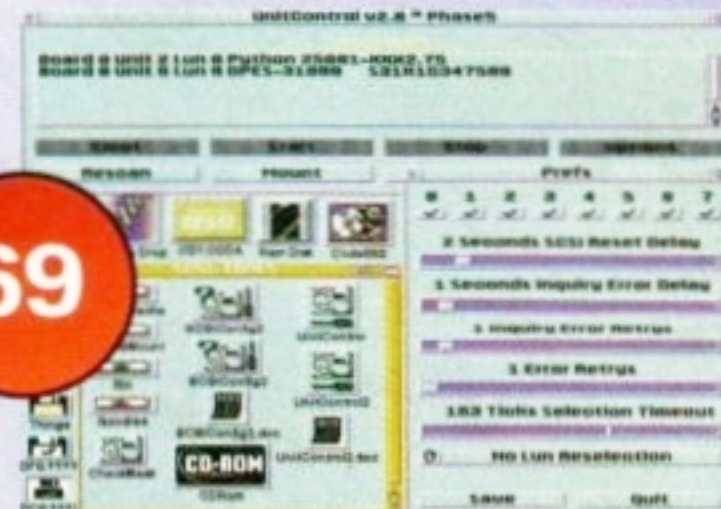
MAKECD

Our esteemed editor examines this German alternative to *MasterISO*. The gleam in his eye tells us he's already very impressed.

CYBERSCSI MARK 2

Simon Goodwin stands well back as his machine goes into read/write overdrive!

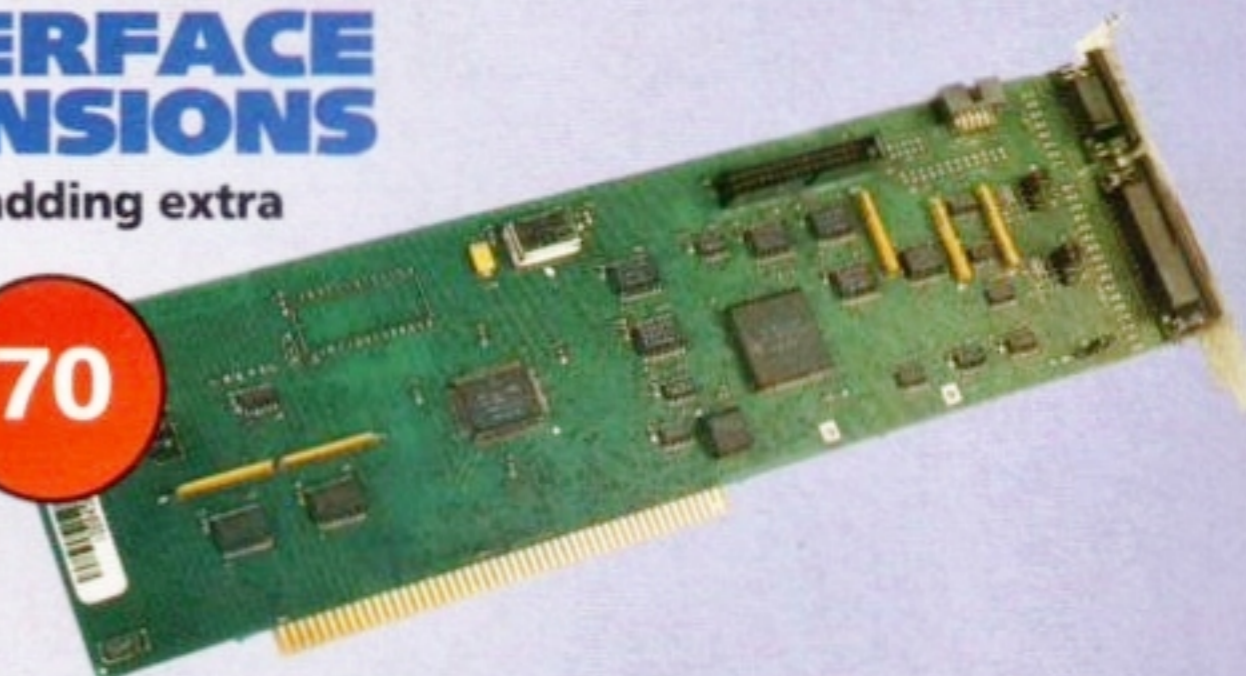
69



ZORRO INTERFACE EXPANSIONS

These two boards are perfect for adding extra serial and parallel ports, as Simon Goodwin discovers.

70



73

WORKBENCH

Graeme Sandiford doesn't get depressed by your problems – he views every letter as a challenge.



76

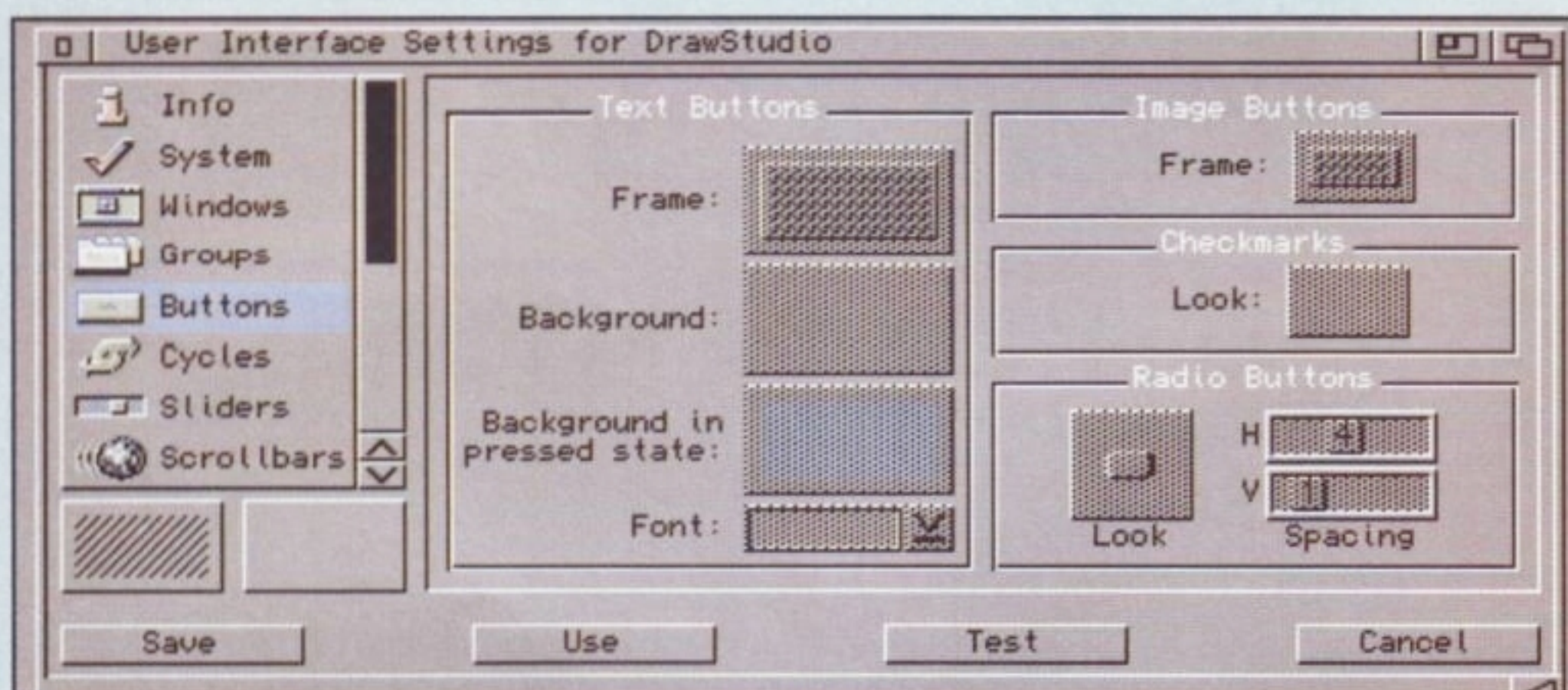
AMIGA.NET

In our monthly Internet extravaganza Darren Irvine looks at some of his very favourite haunts on the World Wide Web.



DrawStudio

Possibly the greatest structured art package the Amiga has ever seen, but what does John Kennedy think? Read on...



The very name "ProDraw" is still enough to send shivers down my spine. It may have been one of the first structured art programs on the Amiga, but it was also frighteningly unstable and never made the vital transition to Workbench 3 and AGA safely. I have a horrible feeling it may have put many users off the concept of a structured art program for life, so it's therefore well overdue that this void has at last been filled by *DrawStudio* – a new drawing program which is bang up to date and solid as the rock of Gibraltar.

The use of MUI may annoy some Amiga users – too bad, it makes *DrawStudio* easy to use. An up-to-date version of MUI is included in the *DrawStudio* package.

The programmers, Graham and Andy Dean, have the success of programs such as *ImageStudio* behind them, and so it's fair to say *DrawStudio* is going to be a polished piece of software. But exactly how good is their first foray into the world of structured art?



VIVE LA DIFFERENCE!

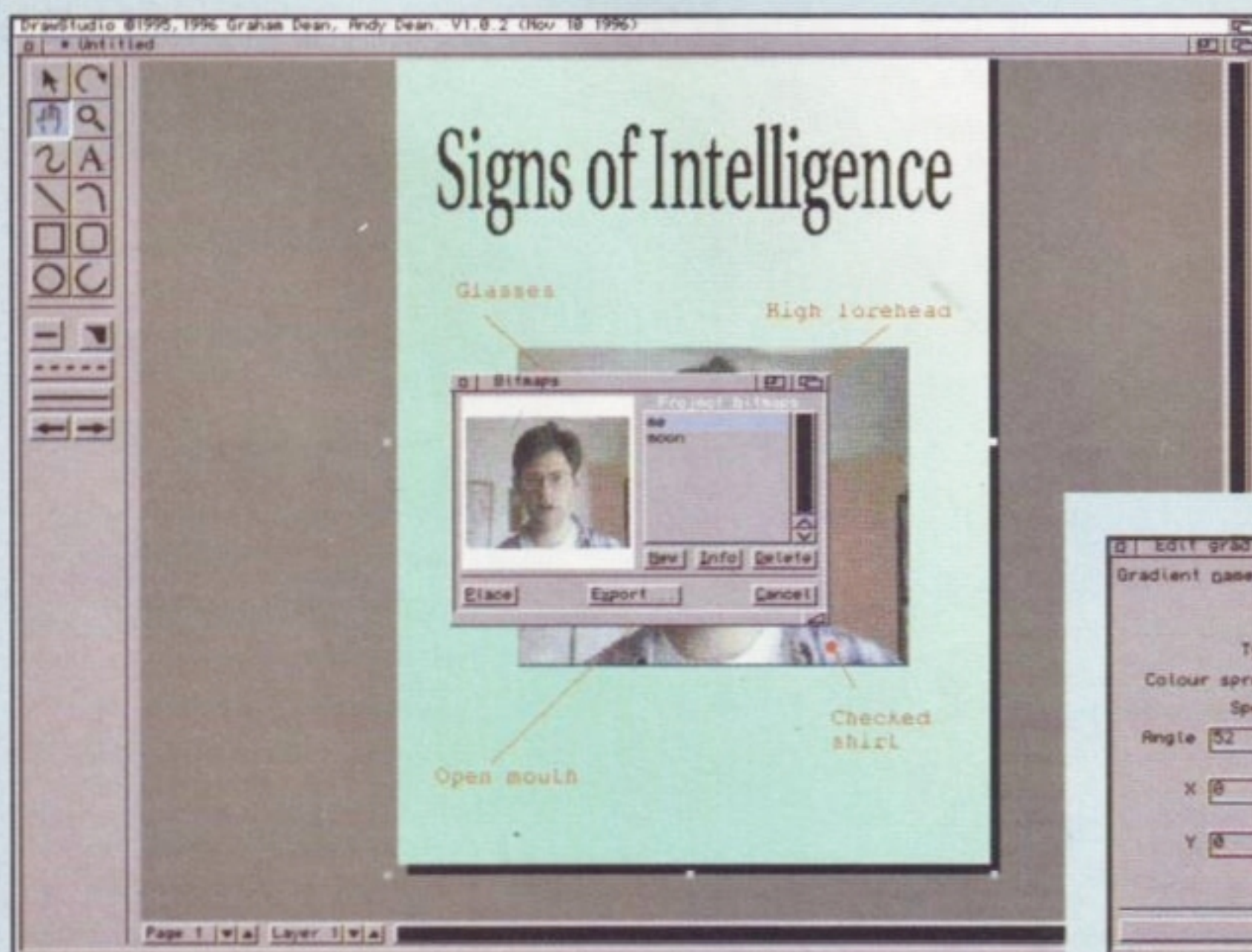
Using *DrawStudio* is very different from using a more traditional paint program

such as say, *Personal Paint* or *Photogenics*. In *DrawStudio* you can draw a line by selecting the line tool and clicking twice with the mouse, but that's only the start. After it has appeared on screen you can then decide to alter its colour. Or make it thicker or thinner. Or maybe add some arrowheads. Or maybe move it around, stretch it, and change the start and end locations. In fact there is never a time when you are totally finished with it: at any point you can click on the line to select it, and then change it some more. Each time you fiddle with it, the page is redrawn to reflect the changes.

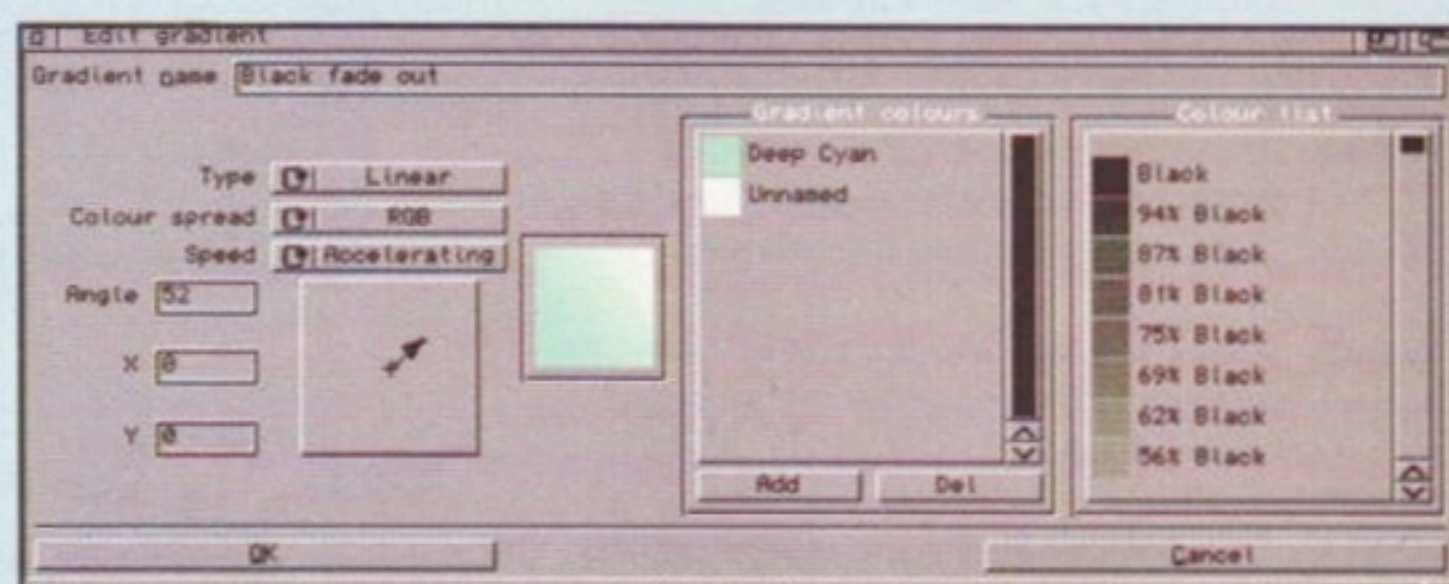
You're not limited to lines of course: rectangles (with and without rounded edges), ellipses and any other outlined shape can be created with a few clicks of the mouse. You are then free to experiment with the various attributes each of these objects are given – for example, you may want the object outline to be a thin black line, and yet the interior to be a light blue colour. No problem, that's only one menu option away.

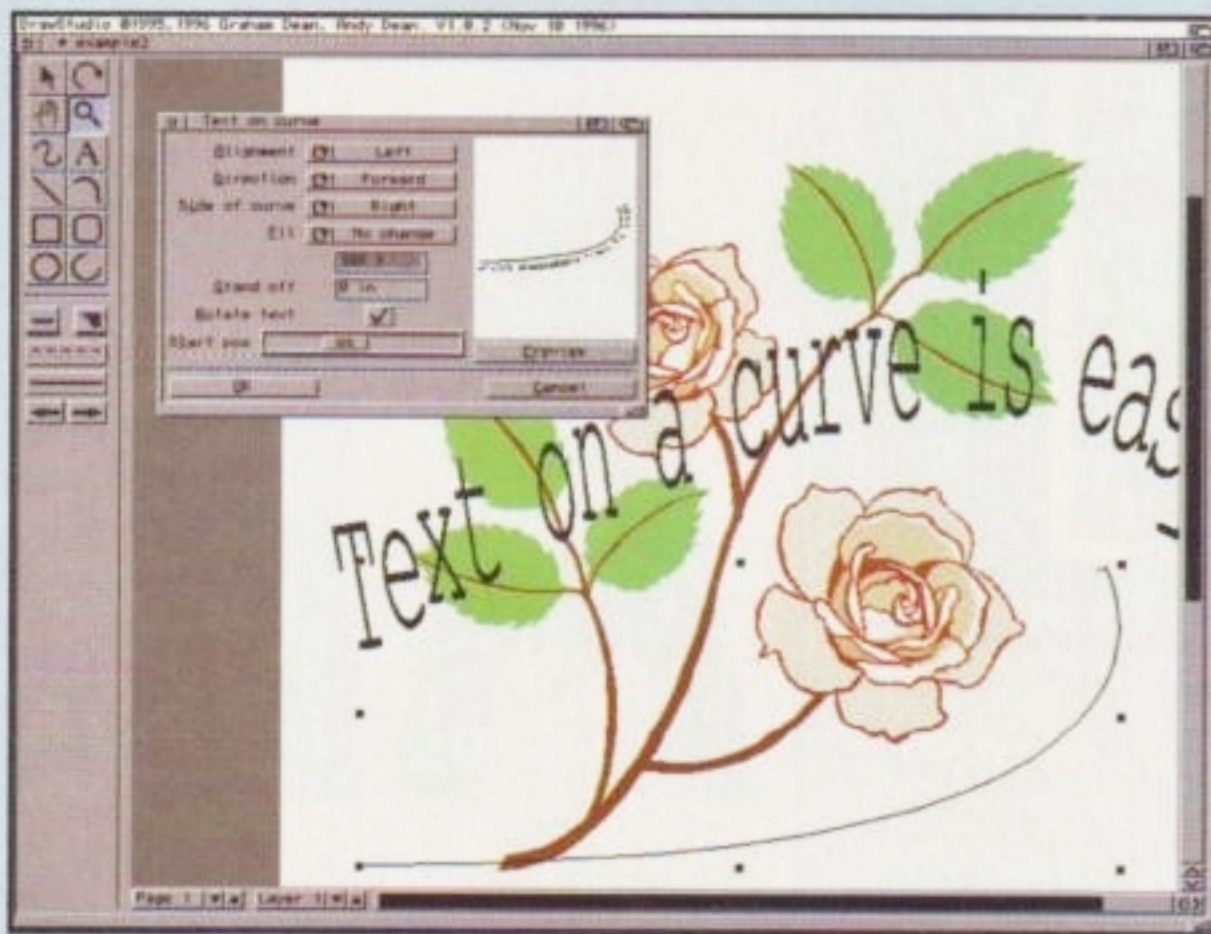
As well as filling the object with solid colours, you can fill it with a pattern or a smoothly graduated shade: a fade from black to blue to white for example. You can either pick a fill texture from a menu of predefined patterns, or create a new one by selecting Edit. You can now drag and drop colours to decide on your ideal shade and pattern. Fill can even be translucent, which means objects

Defining a backdrop is easy. Not only can you select the colours, but also the direction and method of gradation.



Bitmaps (such as IFF images) can be incorporated and used as objects. This makes creating diagrams very easy. Notice the nice green graduated backdrop.



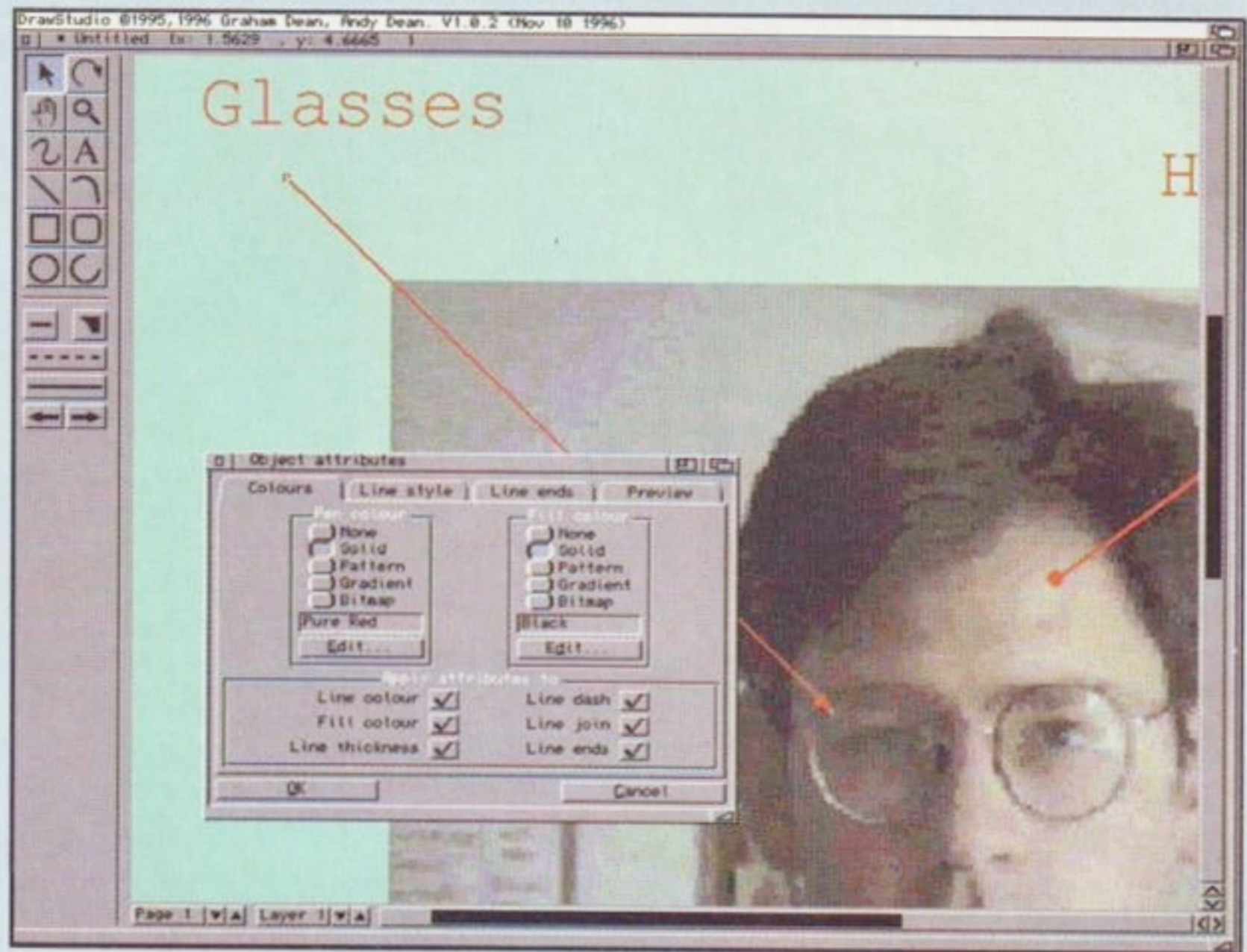


hidden behind show through. This is a great way to give a sense of depth to an object, by placing some objects behind a semi-opaque backdrop.

Soon of course your page will contain lots of objects, and it's a simple task to move them around the page, align them, bring them to the front or send them to the back. *DrawStudio* has also borrowed the concept of layers from *Photoshop*, which means you can have multiple pages overlaid on top of one another – perfect for keeping track of complicated images.

When positioning objects, the powerful "snap" feature soon becomes essential. Unlike a conventional paint program, you aren't limited to an imaginary grid for your objects to lock

Text can be made to follow a curve in numerous ways, which makes it easy to combine it with graphics.



You can clearly see in this zoomed in view that although the bitmap is starting to show pixelisation, the structured art (the lines and text) is still crisp and clear.

to. Although a grid is very useful for creating charts and graphs, you can also control the way in which objects snap to other objects. This allows a line to snap to a point on a curve for example, without any overlap. The cursor changes shape depending on whether you are snapping to a mid-way point, or an apex. Clever stuff.

Text is treated like any other object, which not only makes it very easy to place and manipulate, but also to change the colour. Like any other object, text can appear in any colour, or rendered with a texture or graduated fill. It's surprisingly easy to use *DrawStudio* to create exactly the text you want: whether that means selecting a typeface (*DrawStudio* reads Adobe Type 1 fonts), selecting a colour or warping the text to follow a curve or line in a particular way



EASY FOR BOTH OF YOU...

A lot of time has been spent making *DrawStudio* easy to use. The tool bar may look pretty tame but that's misleading. There are hundreds of options but instead of being bombard with them all at once, you only need to change what is relevant at the time.

Your Amiga will appreciate the control over the way in which the display is created. For top speed you can view a black and white representation, but you can also make use of 256-colour, 256-grayscale or 24-bit colour. Which mode you use is a matter of juggling your Amiga resources with what you need to see: if

Continued overleaf →

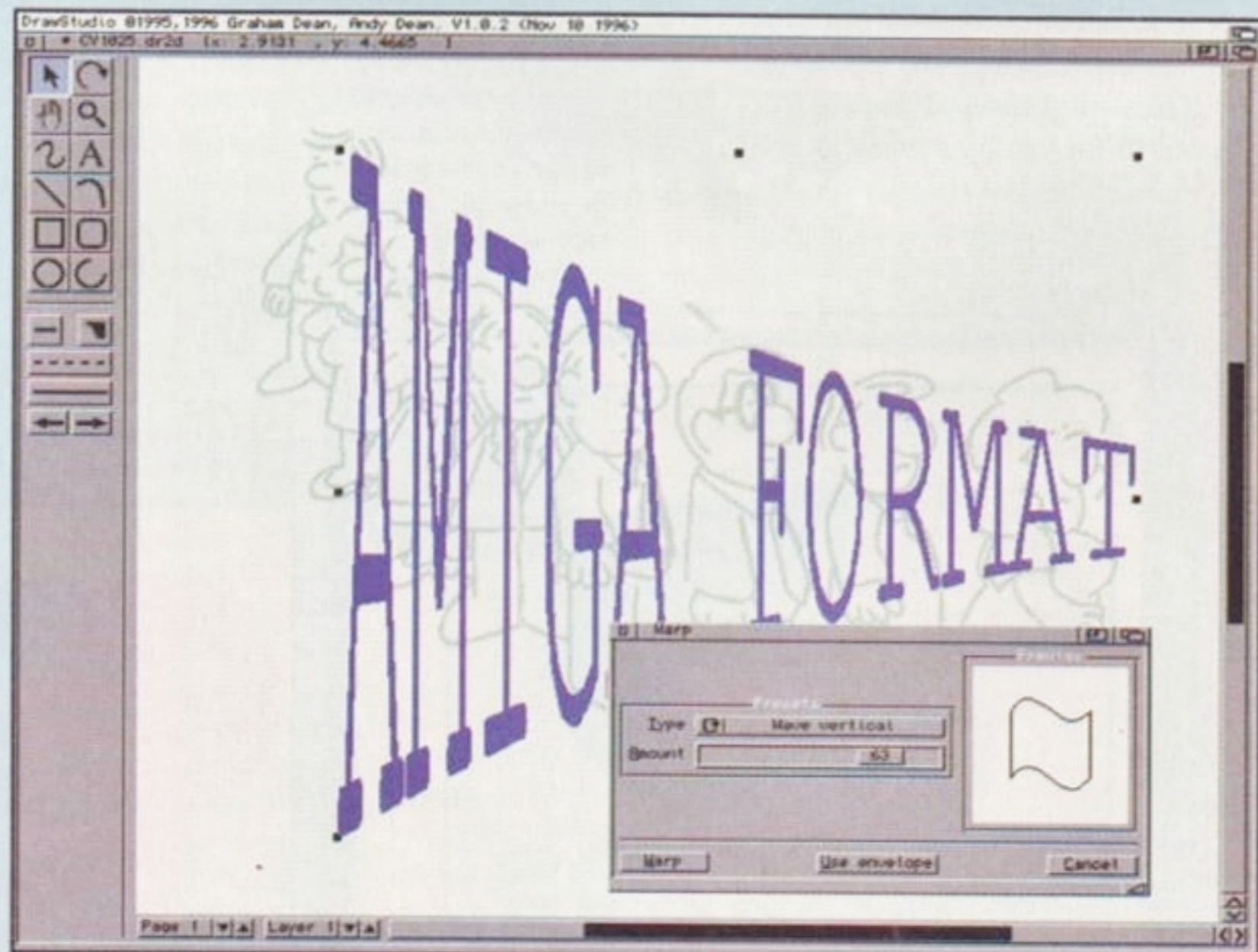
WHAT IS STRUCTURED ART?

Structured art programs are as different as you can get from the more traditional "bitmap" orientated paint programs, such as *Deluxe Paint* or *Art Effect*. These programs are great for daubing colour over the screen and using image processing tools on digitised or scanned photographs. *DrawStudio* is not designed to be used like this at all. Rather than dealing with pixels of colour, *DrawStudio* deals with "objects". Everything you draw is an object which can be manipulated.

Imagine trying to draw and label a diagram in a paint program. Lining up all the boxes and text is possible, but not particularly easy. With *DrawStudio* the individual elements are stored as descriptions rather than bitmaps: the arrow you draw is stored internally as a line from point A to point B. Once you've drawn it, you can still re-size and move it at any time.

Similarly, the text you enter isn't stored permanently at that location and can be changed on a whim. In many ways you can think of *DrawStudio* as a program with an infinite "undo" button.

Although a structured art program can lack the instant gee-whizz approach of a paint program, in many ways it can actually be more useful. If, like me, you lack the artistic ability to draw an object or scene in a paint program, a structured art program is a dream come true. You can spend as much time as you like creating the shapes, defining their colour and positioning them precisely. At any time you can go back and alter a shape, change its colour or re-scale the entire image with no loss in quality. For creating graphs or diagrams it cannot be beaten, and at it's still possible to save the final image as a bitmap – the best of both worlds.



Text (and other objects) can be warped in several ways. The image behind has been made lighter by covering it in a semi-opaque white rectangle.



◀ you want to see the transparency effects you will need to select 256-grayscale or 24-bit colour. *DrawStudio* will work on most graphics cards too: certainly on my Picasso II / CyberGraphX system the screen display was relatively speedy and very colourful.

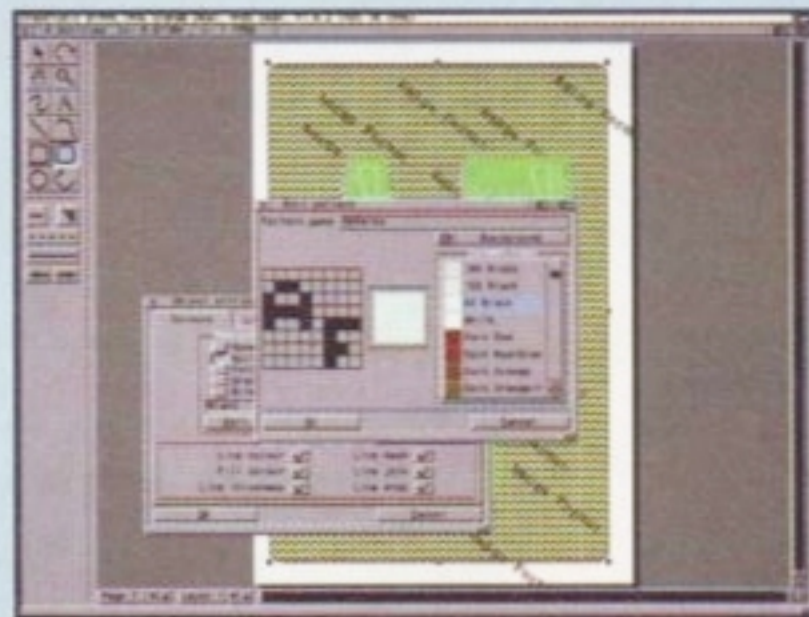
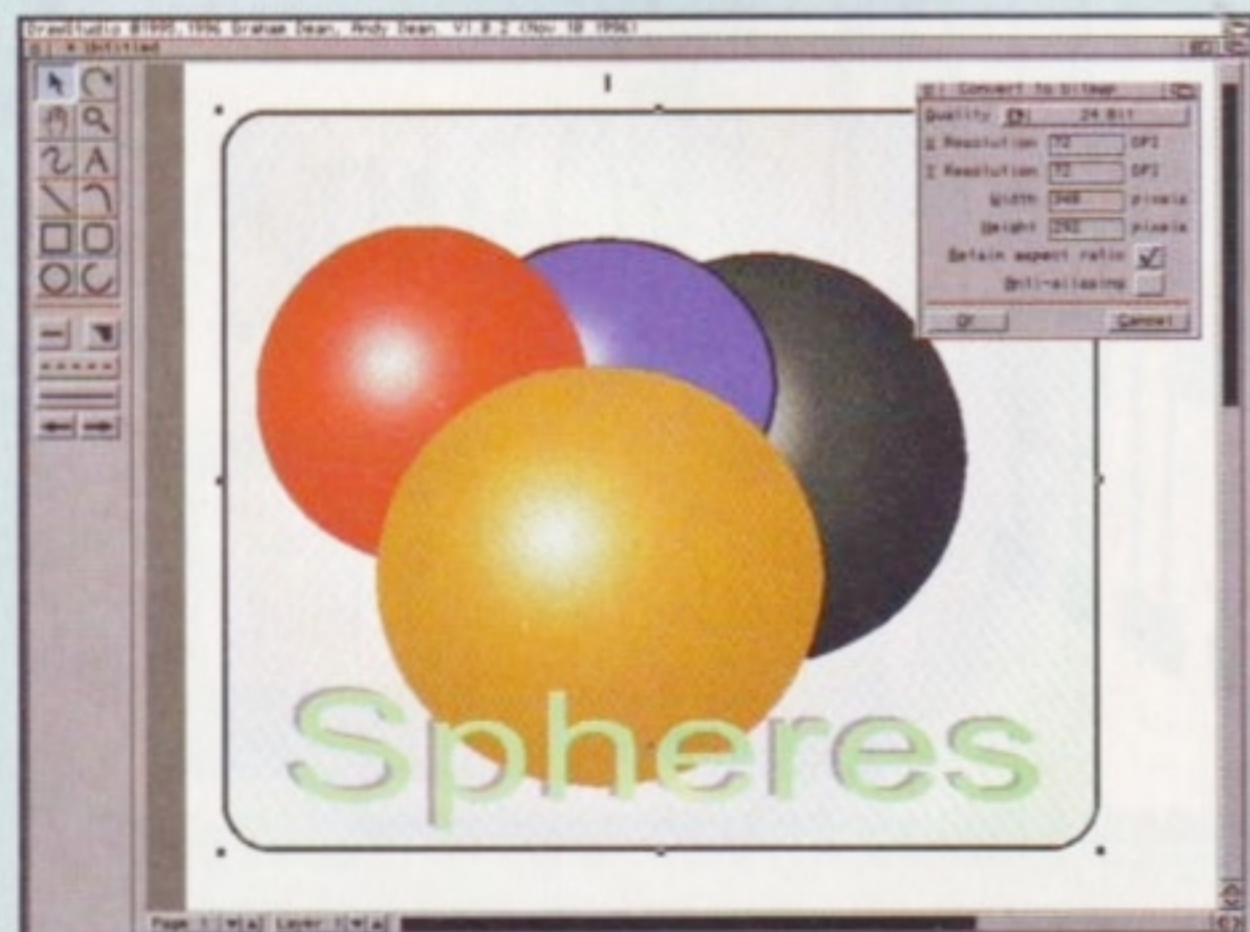
The quality of the rest of *DrawStudio*'s output depends almost solely on what you want to do with it. All objects are stored internally using 24-bits, so there are over 16 million colours to choose from. This keeps graduated fills smooth, for example. Remember also that objects are stored as descriptions, this means if you draw a line or a curve you get the smoothest possible output. If you have a good printer, the final output will be superb.

DrawStudio is very clever in the way it can convert either an entire page or an individual object from structured format into bitmapped format. (There isn't the option to convert a bitmap object into a structured object but this shortcoming is due to be included in an update.) This means you can take your carefully designed and lovingly filled text, save it to disk as an IFF file (using anti-alias to remove any jaggies) and then use it in a desktop video program or import it into your DTP package.

The extra features of *DrawStudio* mean that outputting drawings in structured format for inclusion into other programs is a bit of a non-starter at the moment. *DrawStudio*'s own

Multiple projects can be opened at once, making it easy to cut and paste objects between windows.

Structured art can be converted to bitmap format. Take this image of sphere for example, created with graduated fills. When converted...



It's possible to fill objects with user-defined textures as well as colours or tints.

format is therefore only of use to *DrawStudio*. However, being able to print directly from within *DrawStudio* and also create and save bitmaps at any resolution is a suitable workaround.

When it comes to file formats, you're totally spoilt for choice. As well as IFF, *DrawStudio* will save bitmapped graphics in BMP, GIF, JPEG, PCX or TIFF formats. As well as being an excellent drawing program, it will convert files for you. Structured art can be saved in PostScript format for professional quality printing and inclusion in other programs – even those running on other platforms.

It's also great to see an ARexx port present, which means it's possible to automate tasks: several example scripts are included which will create drop shadows and draw objects such as bursts, stars and pentagons.



CONCLUSION

There may be those who complain that *DrawStudio* runs using MUI. Stuff 'em, I say. As far as I'm concerned it's irrelevant, and using MUI (a full version of which is included) results in a powerful and easy to use user-interface. Anyone who uses MUI as an excuse not to buy this software is simply stubborn to the point of stupidity.

Structured art programs should be considered a basic necessity for all DTP fans, but they also have plenty to offer any Amiga user with an interest in graphics. Everything from Web sites to desktop video work and presentations will benefit from *DrawStudio*'s graphical

..to bitmaps, they look like this. The colours are all stored in 24bits for a smooth finish.



DrawStudio is perfect for creating posters, tickets, stationary – you name it.

expertise. The authors are even talking about including an integral slide-show program in future versions, and there's no doubt that *DrawStudio* is capable of some very professional results.

This is another excellent productivity tool. It's powerful, well supported and an absolute bargain for the asking price. Trying to discover flaws isn't easy. Perhaps the Warp tools could have been applied to bitmaps as well as structured objects, and maybe there should be more control on saving final images in structured format for existing Amiga software. However, it's possible to work round these shortcomings, and they shouldn't be taken as serious omissions.

DrawStudio is another superb way to make sure your Amiga remains a useful computer. Team up with a bitmap graphics program and you'll have all the tools you need to create excellent illustrations, charts, technical drawings, web graphics and just about anything you can display or print.

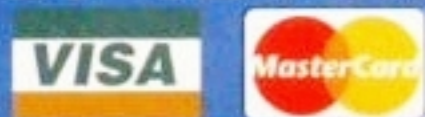
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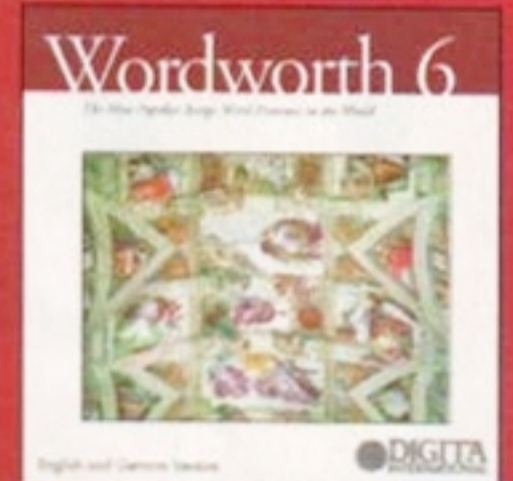
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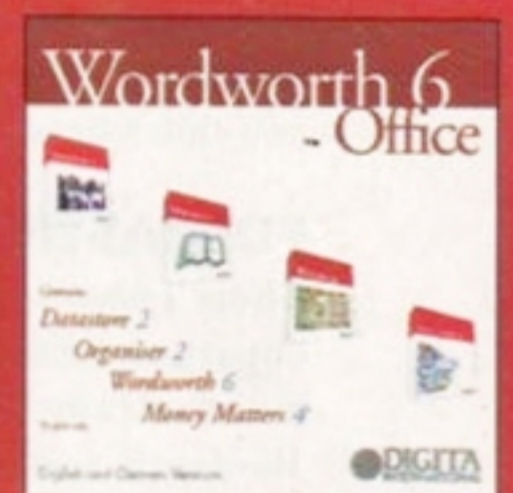
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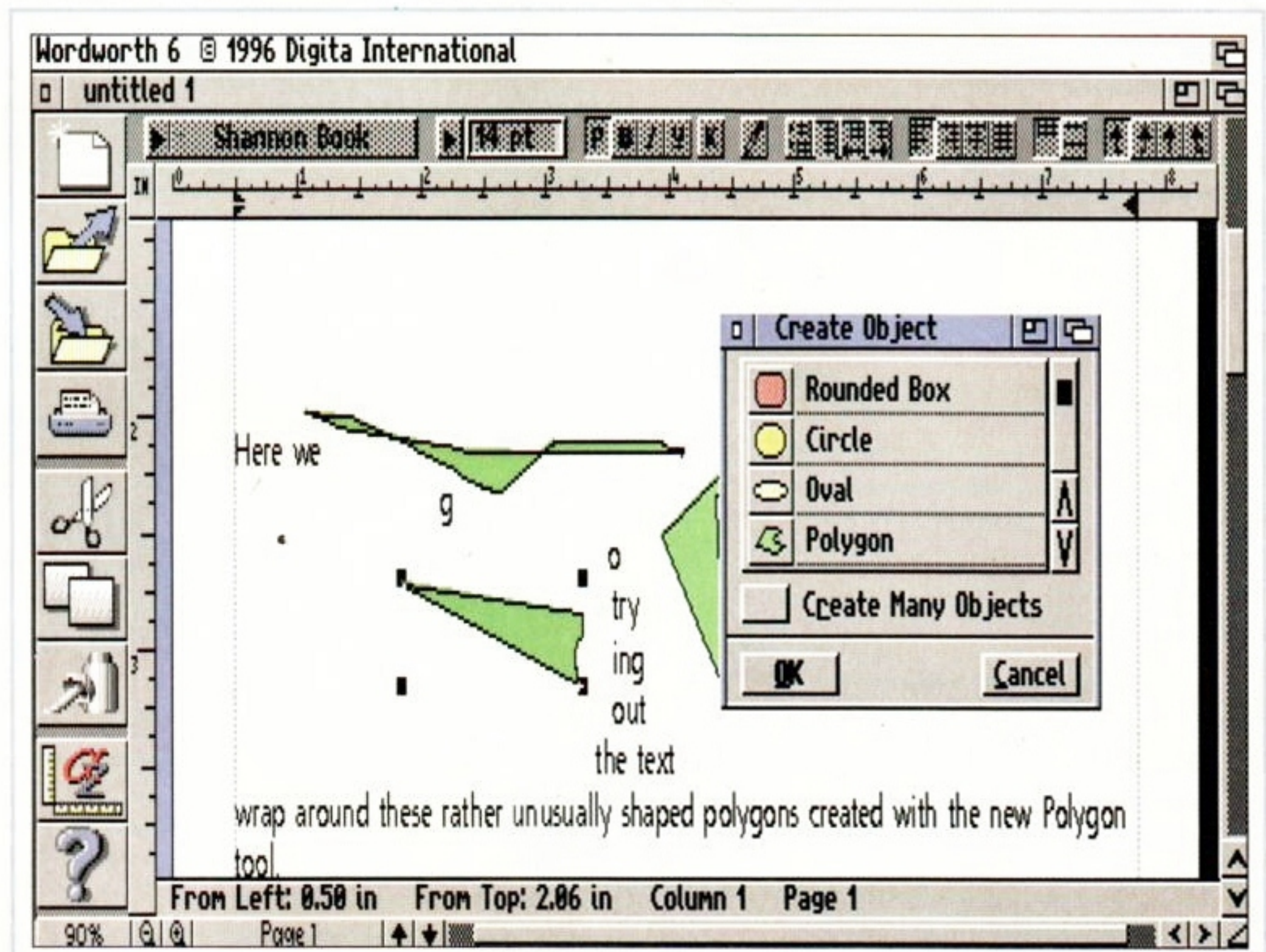
A complete office solution. David Taylor reviews the latest development from Digita which includes a new version of the almighty word pro – Wordworth.

Great minds think alike. Back in AF88, when I reviewed *Final Writer 5*, I suggested bundling a whole set of software together as a suite – something which has proven to be very popular on the PC. It appears that Digita have also decided this sounds like a good idea. For the first time, Digita have gathered together their stable of Amiga programs on one CD-ROM to give everyone a complete office solution. *Wordworth* has always been their biggest puller so wisely, they have headed the bundle with a new version.

The CD-ROM only contains 22Mbs but that includes both English and German versions of the software and over 6Mbs of clipart in varying colour depths and divided into appropriate sub-directories. The quality of the art differs and it's not an exhaustive selection but it's a decent resource if you don't have hundreds of clipart CDs.

FONTASTIC

There's also nearly 50 fonts. Like the clipart, these aren't installed automatically when you install *Wordworth 6* so you need to copy them manually onto your drive and then use the Install Fonts option to add them into the list available within the program. Digita should perhaps have checked the fonts more thoroughly before putting them on. Taking a look at the binary, there is a mildly sexist joke built in. You'll have the feminist's



The new polygon tool lets you draw shapes of any type – however irregular. You can also have text wrap, although still only on one side.

on your backs for that, lads (and lasses). And clipart called Bimbo probably won't help your defence either!

SMALL CHANGE

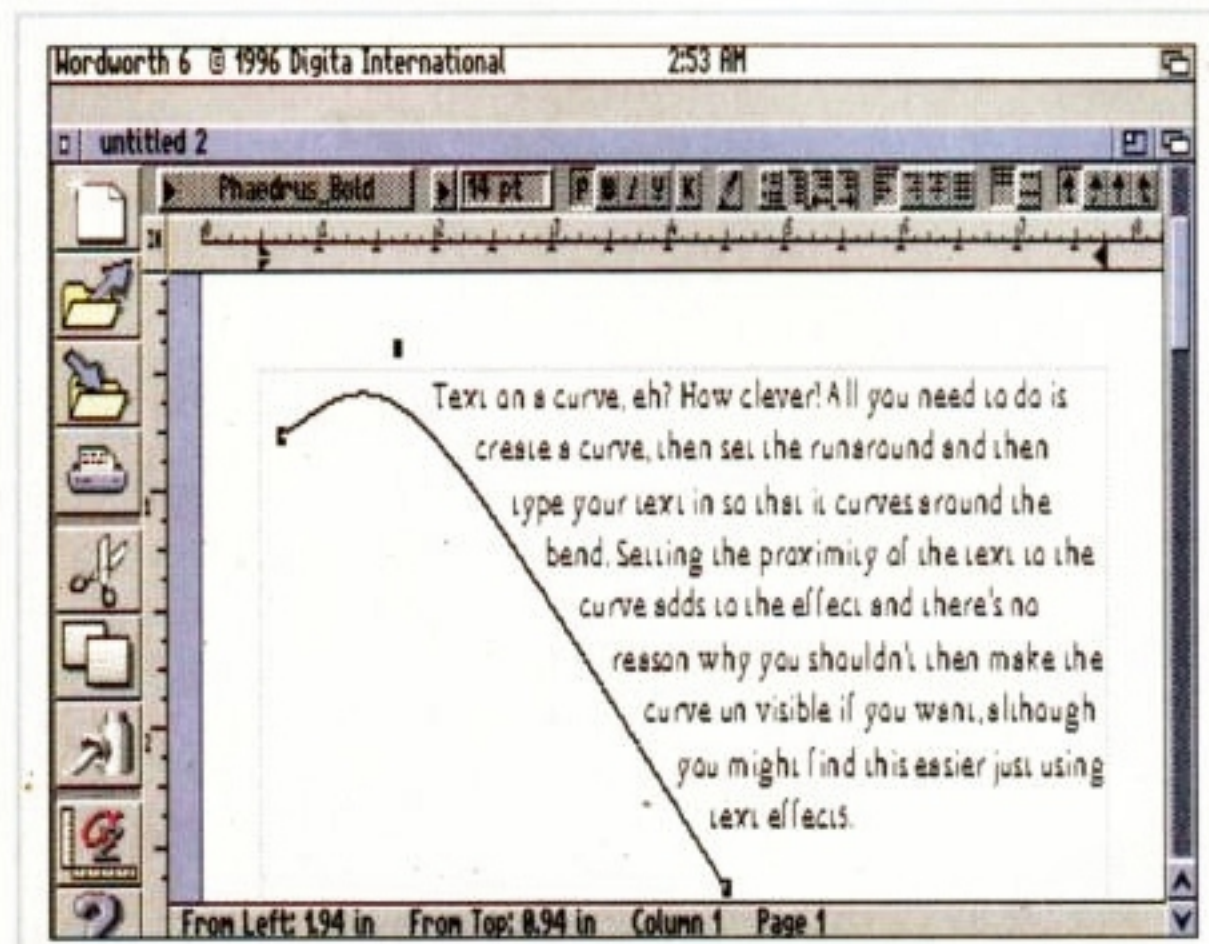
As far as the new version of *Wordworth* goes, few changes have been made to the actual program. In all honesty, there are little more than tweaks and that hardly justifies a whole new version label. The biggest change is the addition of the fonts and clipart. Still, one definite improvement is the inclusion of what Digita call the Watermark. This allows you to make use pictures as backdrops with text typed over the top. Unfortunately it doesn't seem to actually "knock back" the picture, only making it a backdrop, so you may need



to make it faded within an image manipulator before using it.

There are also a few new drawing tools. The polygon tool lets you draw any type of object that you want with as many sides as you like. You can adjust the thickness of the lines and colour as well as the fill colour. On polygons with diagonal lines (such as the scrawl in the picture we've printed) the fill seems unsure of how to fill correctly and you end up with something that looks a bit like a child has coloured it in. Although you'll probably never want to create an object that looks like that, it can happen accidentally if your hand slips.

The points of the polygon are marked by pressing the Ctrl button, but you have to keep the left mouse button held down all the time while you're drawing. Releasing it will join the last point up with the first. Also you only have the option of a single colour fill. I



The bezier curve is created in an unusual, but effective way, using a triangle. It can then be edited in a more normal manner.

still hanker for the ability to draw an object and fill it with a bitmap. This could then be moved around inside to the right position. That would be a really useful and powerful feature.

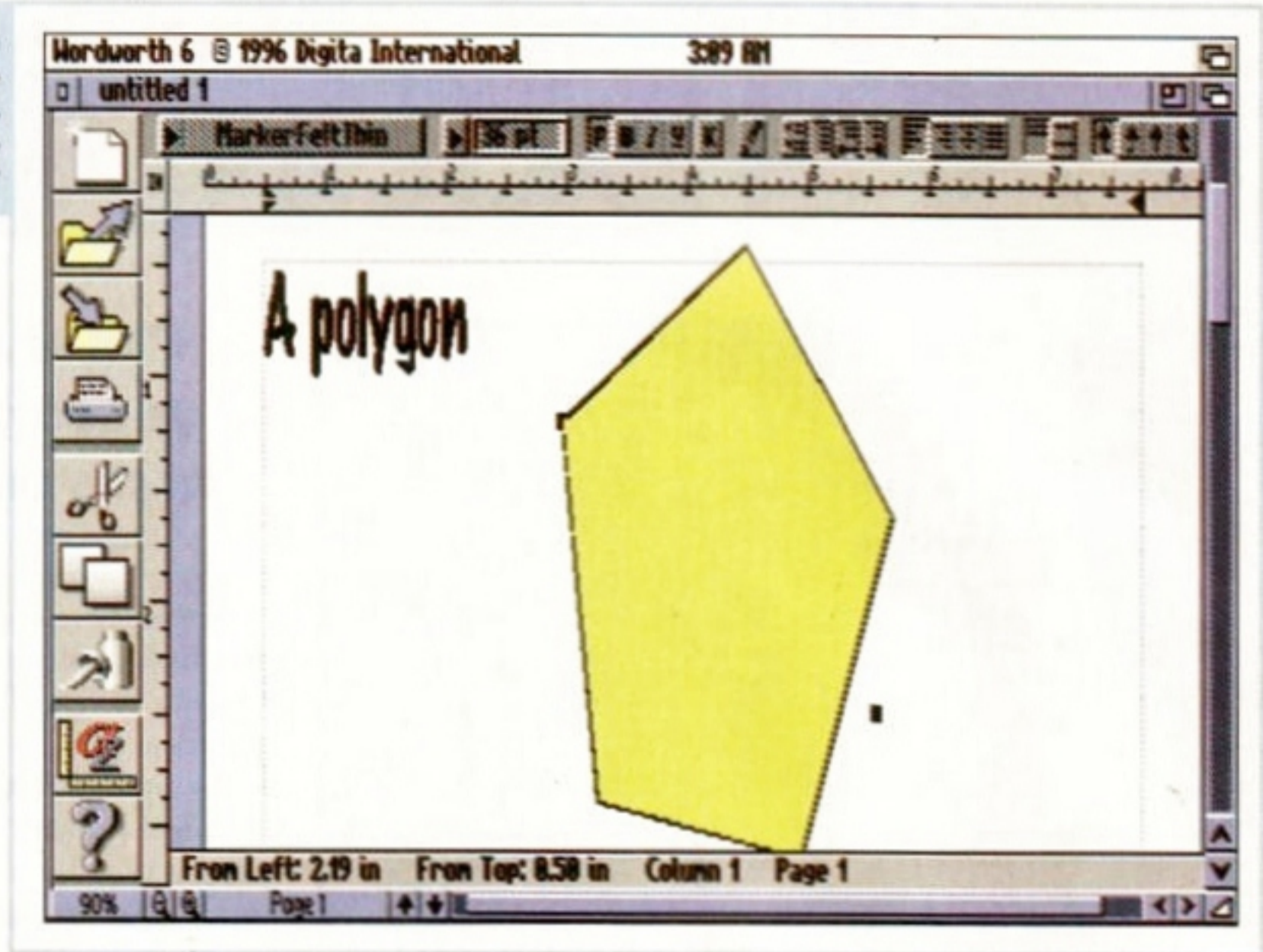
Close to the polygon is the new freehand drawing tool. This helps you to make parts of your document more stylish. You could use it to ring a word to make it stand out for example. Freehand drawing still creates an object which appears on the page, rather than becoming part of anything, so you can pick it up and re-size it later.

WORDS ON A CURVE

There's also a bezier curve tool, which allows you to draw a smooth curve by defining the triangle that contains it. This feature allows you to create text on a curve in a similar, although by no means identical way, to *DrawStudio*.

Of course, *Wordworth* has text effects, so there are already plenty of ways to create spirals and the like, but this is fast and quite useful. It would have been even better if you could create a bezier curve with more than three points. You would then be able to create an "S" shaped curve – something

The regular polygon doesn't look quite right. Are those sides supposed to be the same length?



you have to do using two curves at the moment.

Lastly in the new drawing tools section is the regular polygon. This lets you draw a polygon with a number of regular sides (like a 50p piece). By default the number of sides is 5, but you can change this to anything between 3 and 20. Again, another useful tweak.

RICH TEXT

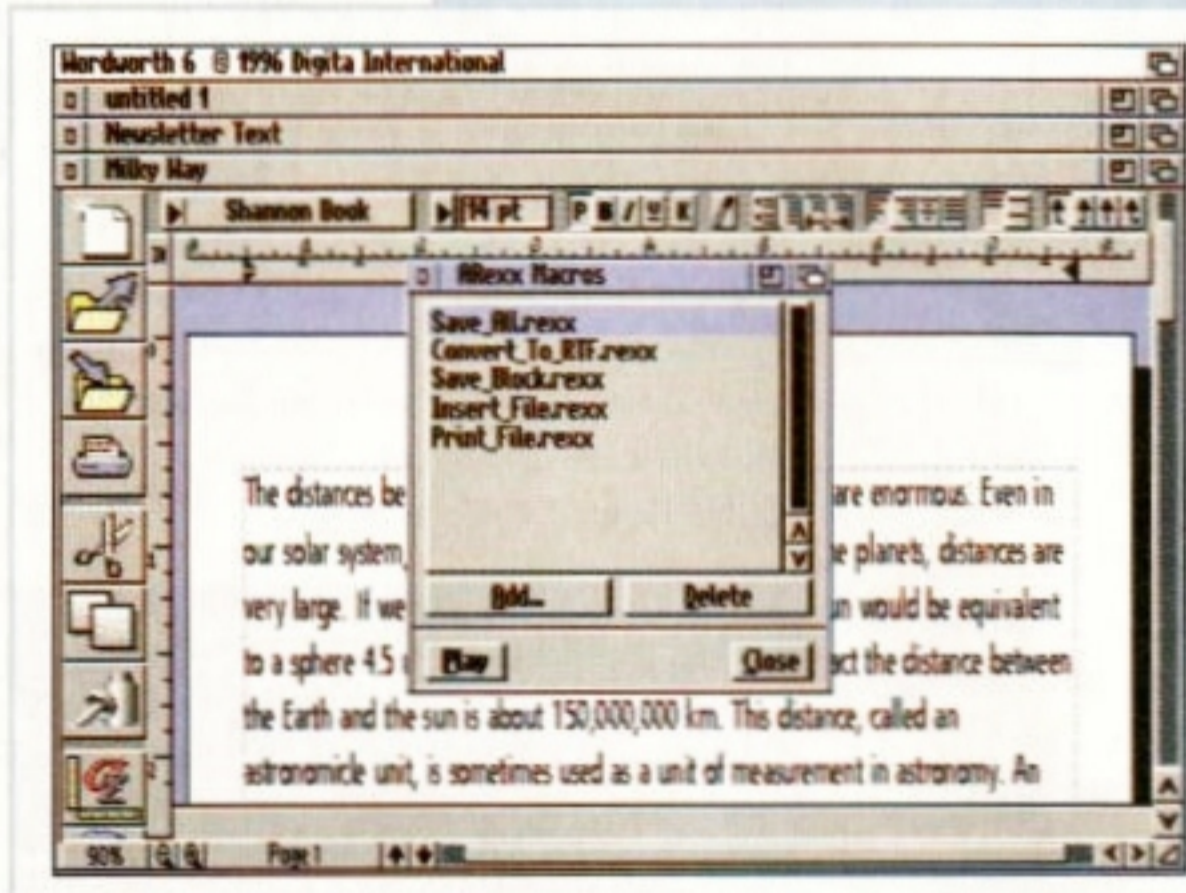
The support for RTF format has been improved so that it now includes the following: text, font name, size and style, justification, line spacing, paragraph indents, tab marker positions and paragraph space before/after. You can also set which font the text will be mapped to when opened on a machine without the font used. RTF is a sort of expansion of ASCII, the format everyone uses so that text files can be read on any computer. RTF takes this one step as an accepted format that supports the above features, where ASCII would lose all file information, including fonts and anything but carriage returns.

There are more ARexx commands included to cover the new features, and a password protection facility allows you to ensure your documents are secure from prying eyes. If you have sensitive documents, like your CV for instance, you can make sure it doesn't get tampered with.

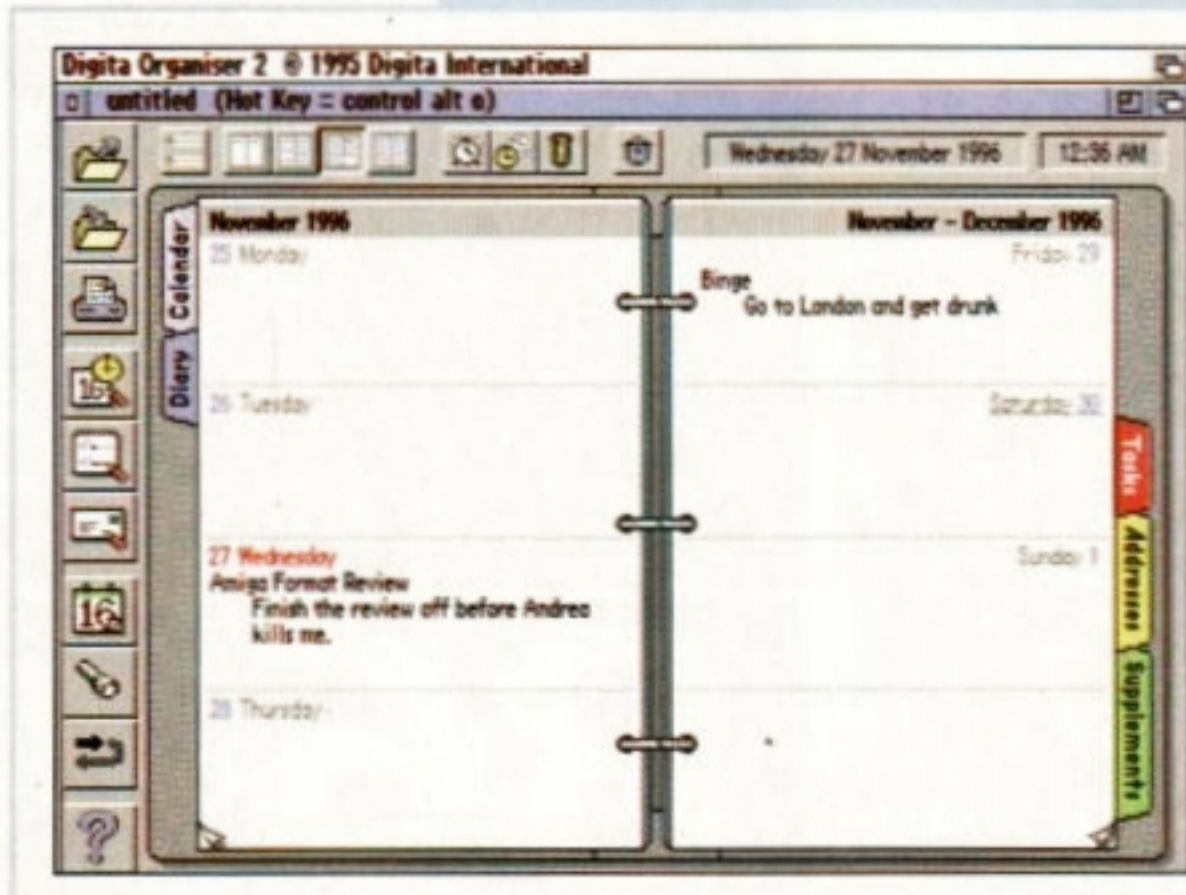
All in all, *Wordworth 6* can hardly be considered a major upgrade. The tweaks are very nice, but there are some serious tools still missing. Improved HTML support (more than *Final Writer* managed) would have been very useful.

In conclusion, few users with *Wordworth 5* will want to upgrade just for these small additions – unless they also want the additional software. This is more an exercise in bundling than a new release but that doesn't stop it being a fantastic program.

New ARexx commands have been introduced and a full list is available in the documentation.



The suite of software that makes up *Wordworth 6 Office* includes the award winning *Organiser 2*, as well as *Datastore 2* and *Money Matters 4*.



What a Bundle!

Bundled with *Wordworth 6* come three other products to complete the Office suite.

Organiser 2

The excellent personal organiser complete with 96 Diary themes – they really should be 97 by now!

Datastore 2

The database program.

Money Matters 4

Offers financial management and control.

A good group of products and certainly the way to add value to the CD-ROM.

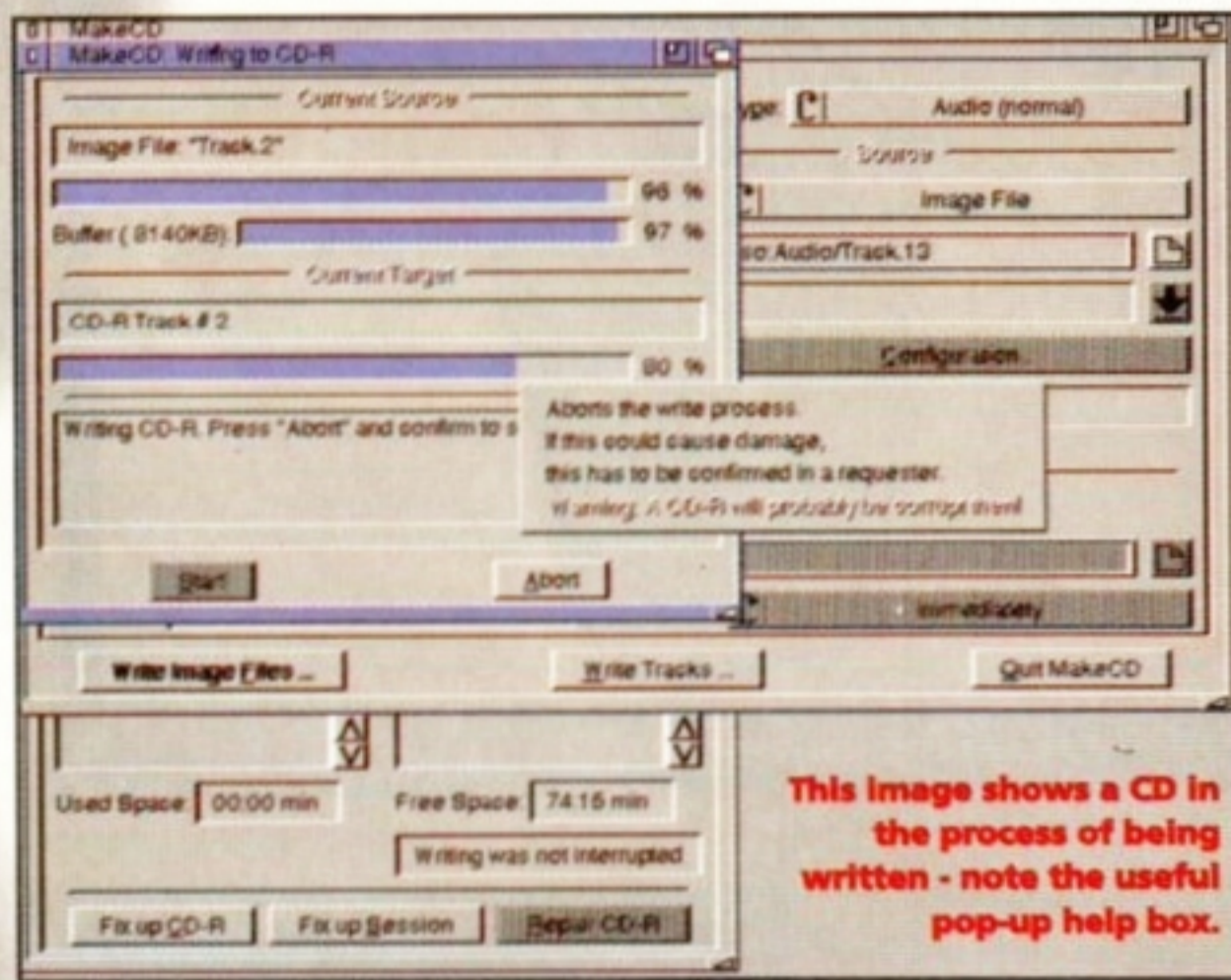
Distributor: Digita 01395 270273
PRICE: £49.99 or £34.99 if you upgrade
REQUIREMENTS: WB2, CD-ROM drive, fast processor recommended (030+)

SPEED: ●●●●○
You really need an 020 and even more to make the most of *Wordworth*.
MANUAL: ●●●○
Online help is what you get buddy.
ACCESSIBILITY: ●●●●○
As easy to use as ever. If you do get stuck the online help is very fast.
FEATURES: ●●●●○
Everything you need.
VALUE: ●●●●○
Exceptional value for money.
OVERALL VERDICT:
Not money for old rope, but a mixture of cash-in and tweaks.

95%

MakeCD

As CDs and CD writers become an increasingly large sector of the Amiga market, Nick Veitch checks out some new CD authoring software.



This image shows a CD in the process of being written - note the useful pop-up help box.

Until now, the UK market hasn't had much by way of CD-ROM writing software. Apart from *MasterISO* (AF85), the only tools available have been the ones from the *Commodore Developers Kit*, which although functional, don't support many modern CD writers, and are a little, er, eccentric.

Fortunately, we are about to be saved. A number of German teams are producing more up to date and easier to use software, an example of which we recently picked up at the Cologne show. *MakeCD* has been written by Patrick Ohly and Angela Schmidt (known for the *Meeting Pearls CDs*).

BASICS

There are basically two parts to making a CD. Firstly, you have to build an image of the CD - a big file containing all the data you wish to write on the CD, stored together in blocks just as it should appear on the final disc. Secondly, this file needs to be written (with the aid of a CD writer) to a recordable disc.

The actual ISO image is an almost exact image of the final CD, block by block. It includes all the file format information, directory paths and so on. Since Amiga CDs are fairly specialised, it is important to be able to fiddle around with these parameters.

ROCKY ROAD

One way of including extra support is to have a Rock Ridge extension. This is an adjunct to the ISO standard which was developed primarily for Macintosh use. However, the Amiga can hijack this facility, as most modern filing systems for the Amiga (sadly not including the Commodore one) can support this feature. Thanks to the *MakeCD* software, this feature can be used to include all the standard Amiga protection bits (instead of just RWED supported by ISO9660), so you can set archive, pure, script and hidden bits. Although it is a requirement that the users CD-file system must specifically support this feature, it is something which will be appearing in the next version of *AsimCDFS*, and we assume in later versions of *AmiCDFS* as well.

IN OPERATION

Of course, one of the most important things is how the software performs. Is it easy to use? Are the features useful? Does it actually work? I'm happy to say that the answers to these questions are the same single word - Yes!

MakeCD uses a series of well designed windows (which open on the Public Screen) to perform it's various tasks. You

can read source data either from a filesystem device (such as a hard drive) or direct from a CD (although for audio functions, the source CD drive must support CDDA). A preferences menu will virtually set up the hardware configuration for you, and then you're all set to start cutting.

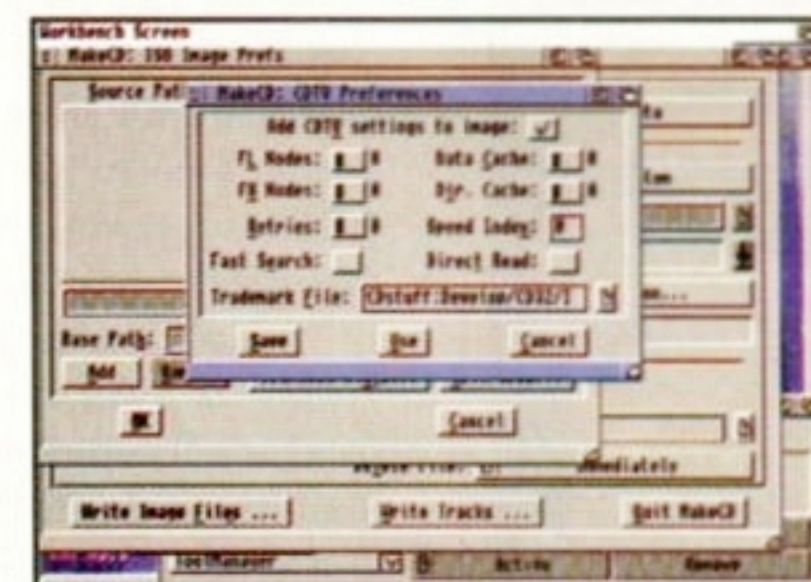
As well as standard ISO9660 CDs, *MakeCD* supports various other functions. You can automatically rename all ".info" files to be lower case (which solves conflicts under WB1.3), opt for standard "PC" filenames, and a variety of Rock Ridge options. There are plenty of different image formats to choose from too, but most people will only be concerned with the "Amiga ISO9660" option. There are a set of preset options, corresponding to various *Meeting Pearls CDs*, but although you can save your preferences as defaults, there is no way of adding your own selection of presets to the menu.

MakeCD also supports multi-session CD writing - this means that you can record on part of a CD, then write other tracks to it at a later date (this is how PhotoCD discs work). It is also possible to delay "fixing up" the disc until later, something not possible with the likes of *MasterISO*, and something which could be useful if you are dealing with a tight amount of disc space.

Although there is no manual as such with this version of the software, the on-line help (in the form of bubble help) and the text file on disk will give most CD-literate users the information they need. People new to CD-ROMs and CD writers may need to look elsewhere first though.

MASTER STROKE

Another stunning innovation included



MakeCD allows a huge range of options to be set, including CD³² support.

TRY IT YOURSELF

The shareware version of *MakeCD* is included on this month's CD ROM, so you can try out the features mentioned here for yourself.



in *MakeCD* is the ability to create CDs asynchronously. This means that the actual CD is cut at the same time as the ISO image is generated. Although this feature is still really in the "experimental" stage (you will have to test it on your specific equipment first, as it is more demanding on your SCSI interface, buffer memory and drives) it does mean you have the potential to master CDs without having a huge amount of free disk space for the intermediate ISO image file.

On the whole this software pushes forward the boundaries of Amiga CD writing. The interface is flexible and simple, (although I do advise running in a largish screenmode, as there can be a lot of windows to navigate between) the software appears to be very stable and it does its job very well.

Distributor: Angela Schmidt/Patrick Ohly, Klosterweg 28/501, 76131 Karlsruhe, Germany.
email: Angela.Schmidt@stud.uni-karlsruhe.de
PRICE: licenses from DM30

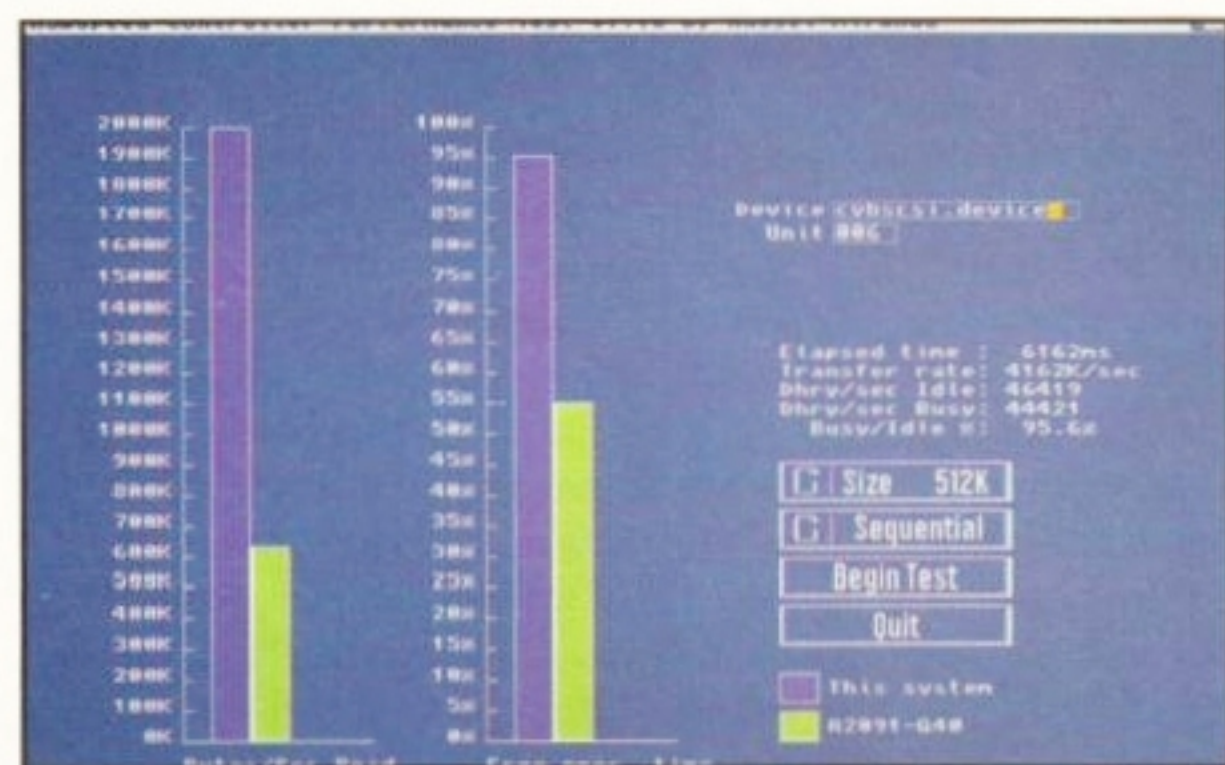
- SPEED: ●●●●○
Seems to be on a par with other software of this type.
- MANUAL: ●●●○
Non-experts may get lost.
- ACCESSIBILITY: ●●●○
Quite a few windows - it may not be clear what's going on in all of them.
- FEATURES: ●●●○
What hasn't it got?
- VALUE: ●●●○
Low personal licence fee is excellent.
- OVERALL VERDICT:
Certainly the best CD-ROM software for the Amiga at the moment.

86%

CyberSCSI MARK 2

Fasten your seatbelts and prepare for the CyberSCSI.

Simon Goodwin reveals how you can connect up to seven SCSI 2 fast drives to your Cyber-Amiga.



Half the size, much simpler and with built-in 'flash' ROM – the Mark 2 CyberSCSI adaptor differs greatly from its predecessor. You can't mix and match parts but the Mark 2 is much simpler because it no longer has a built-in software driver. Instead of memory on the SCSI board, the driver slots into a 'flash' ROM on the Cyberstorm itself.

The term 'flash' refers to the fact that the ROM contents are not truly permanent – they can be updated with special software. It means users can upgrade armed with nothing more than a cheap update disk.

In practice it's still necessary to open the computer to move the jumper and the update only works from the shell on an unconfigured computer, so installation remains a bit of a bind.

I found the computer would not start up at all with the jumper set! I had to boot with it open, then close the link and run the update software. This went without a hitch and the SCSI interface was recognised thereafter. The manual warns of problems if the update fails or is interrupted part-way through.

SOFTWARE

The *SCSI Tools* disk contains 500K of files, including the vital MK2Update utility. *SCSIConfig* is an alternative to Commodore's *HDToolbox*. It doesn't really do anything new, and Phase 5 warn that it may have trouble recognising disks formatted with other controllers.

UnitControl provides some extra SCSI-specific options. The other

At 4156K/second he CyberSCSI goes right off the top of the scale draining less than five per cent of the 68060 power.

Phase 5's GadTools-driven utilities tweak subtle aspects of their SCSI implementation.

options control the protocol used to communicate with each drive, and are best left alone unless you know exactly what you're doing. Other programs include *CDrive* a CD-ROM handler, and *DynamiCache*.



There's no socket on the board for a drive activity light! You need to wire up a light for every drive yourself, which might look pretty on a fully loaded Amiga but seems inelegant.

VERDICT

If you've already got a Cyberstorm Mark 2, this is the SCSI controller for you. It directly accesses the fast memory on the main Cyberstorm board, making it faster and more transparent than any Zorro-based controller.

The Cyberstorm+SCSI combo brings Phase 5 in line with all-in-one accelerators like the GVP 060 and Warp Engine, but at a lower price. The combined unit is bigger and you get internal and external 50 way SCSI connectors at no extra cost.

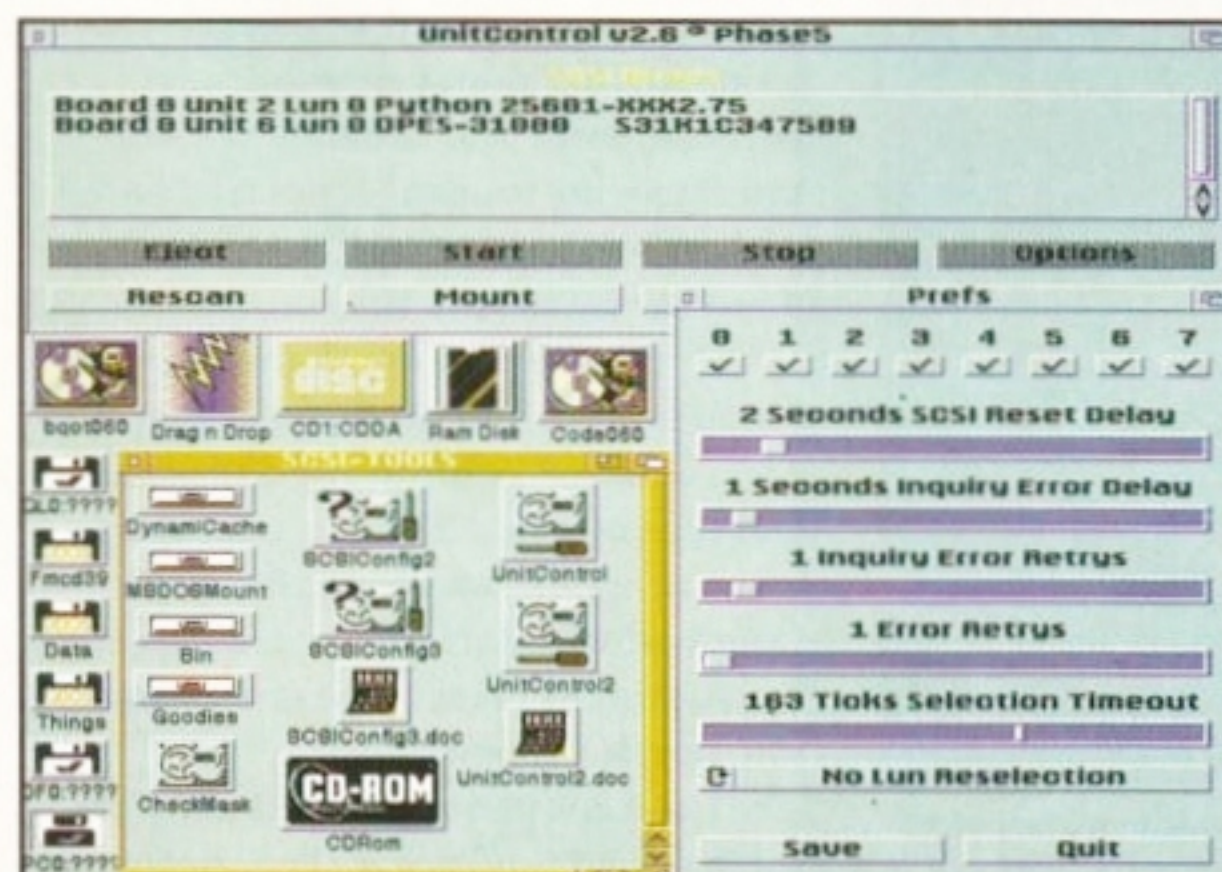
The combination price of £670 reflects Motorola's new more realistic pricing for the 68060 chip. Now that Phase 5 have sorted out their SCSI problems, the performance of current 68060 boards is much of a muchness and availability should now be a major consideration.

PERFORMANCE
The CyberSCSI adaptor uses impressively simple hardware – one custom chip, a timing crystal, and the FAS216 SCSI 2 FAST controller. I tested the board with hard drives taken straight off other Amigas and they worked straight away although I took the precaution of making copies first. If you ignore the advice in the manual and lose a drive or partition, you've only yourself to blame.

The SCSI interface is quite transparent in operation – the drop in CPU performance ranges from around 15 per cent on a very busy machine to under 3 per cent when CPU and SCSI activities are essentially independent. It helps to move data in large blocks, as the interface interrupts the processor briefly after each transfer.

Unlike the Warp Engine and 4091, CyberSCSI doesn't delay interrupts from other cards when busy. Resulting in good performance even when networking or sampling data at high speeds.

The board comes with two cables and the controller's SCSI ID is fixed at seven, so you can't put two Cyberboards on one SCSI bus, sharing drives, as you could with most Zorro controllers.



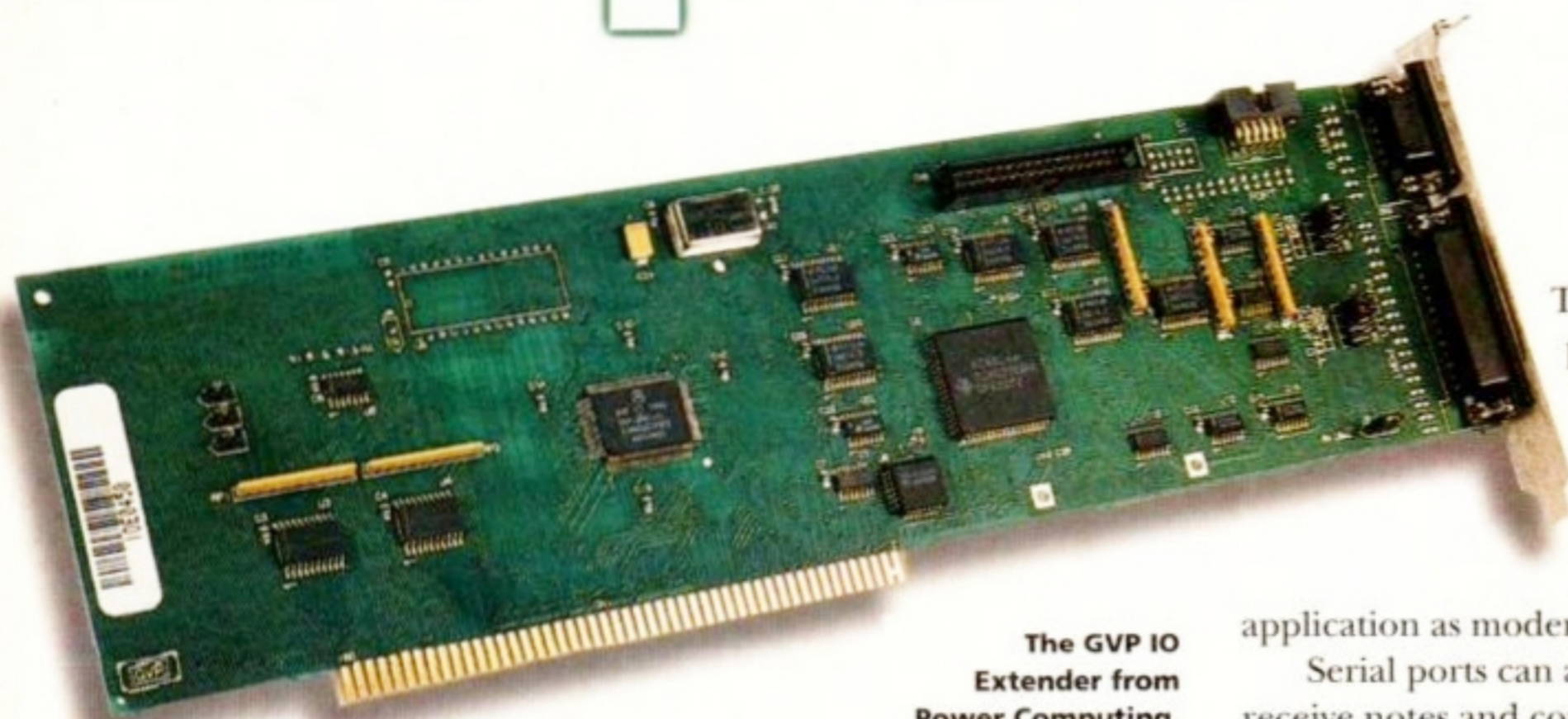
Distributor: Harwood 01773 836781
PRICE: £89.95
REQUIREMENTS: Cyberstorm Mark 2 + Amiga 3000/4000(T)

SPEED: ●●●●●
Only limited by your drives.
MANUAL: ●●●○○
Fine on hardware, scant on software.
ACCESSIBILITY: ●●●○○
Much better than Mark 1.
FEATURES: ●●●○○
A pity it's fixed at ID 7.
VALUE: ●●●●●
At £90 it's good value for money.

OVERALL VERDICT:
If you've already got a Cyberstorm Mark 2, this is the SCSI controller for you.

93%

Zorro Interface Expansions



The GVP IO Extender from Power Computing.

Simon Goodwin discovers how to add extra serial and parallel ports to his Amiga.

Zorro cards are often used to add memory, graphics accelerators and fast drive adapters. But they're just as well suited for more mundane interfaces like serial and parallel ports. That's where the Multiface 3 and IO Expander come in. Each adds another two serial ports and one parallel port to the standard Amiga.

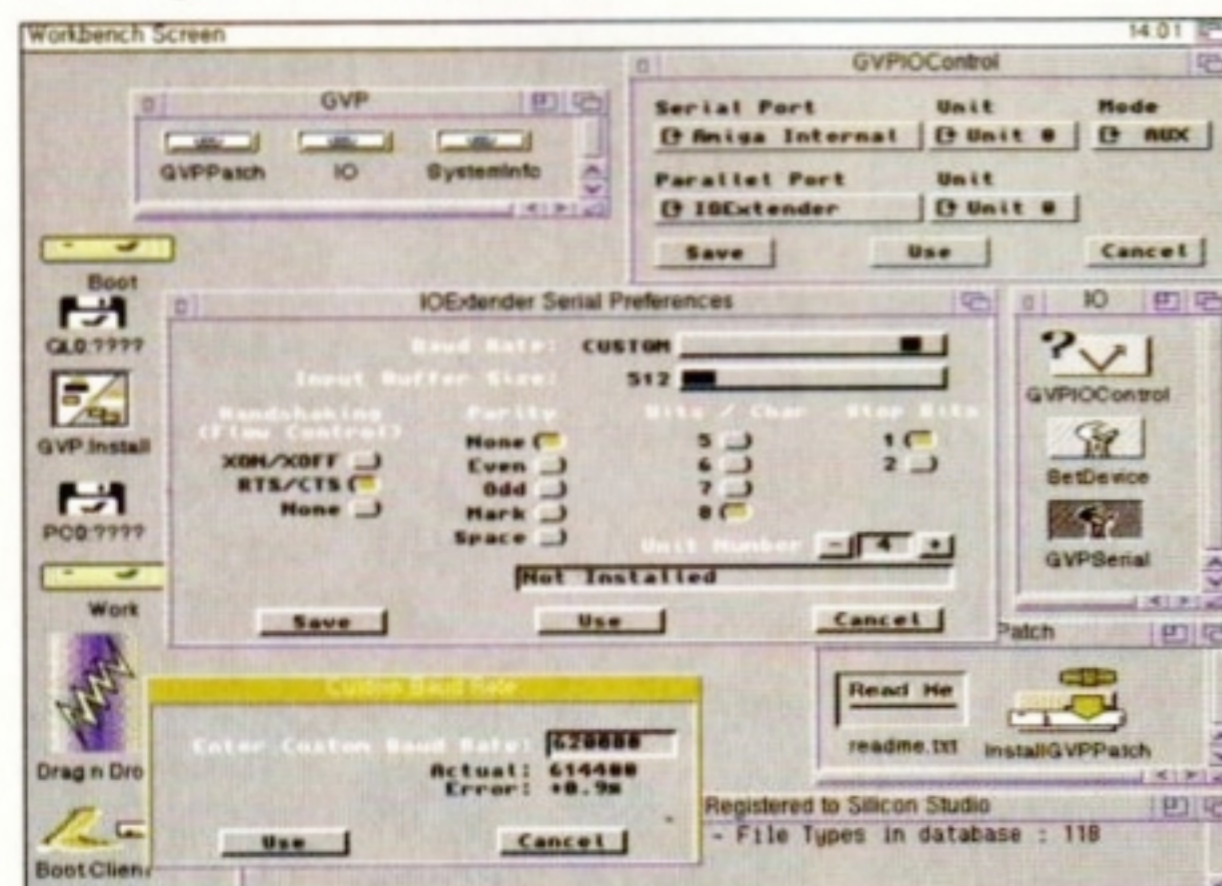
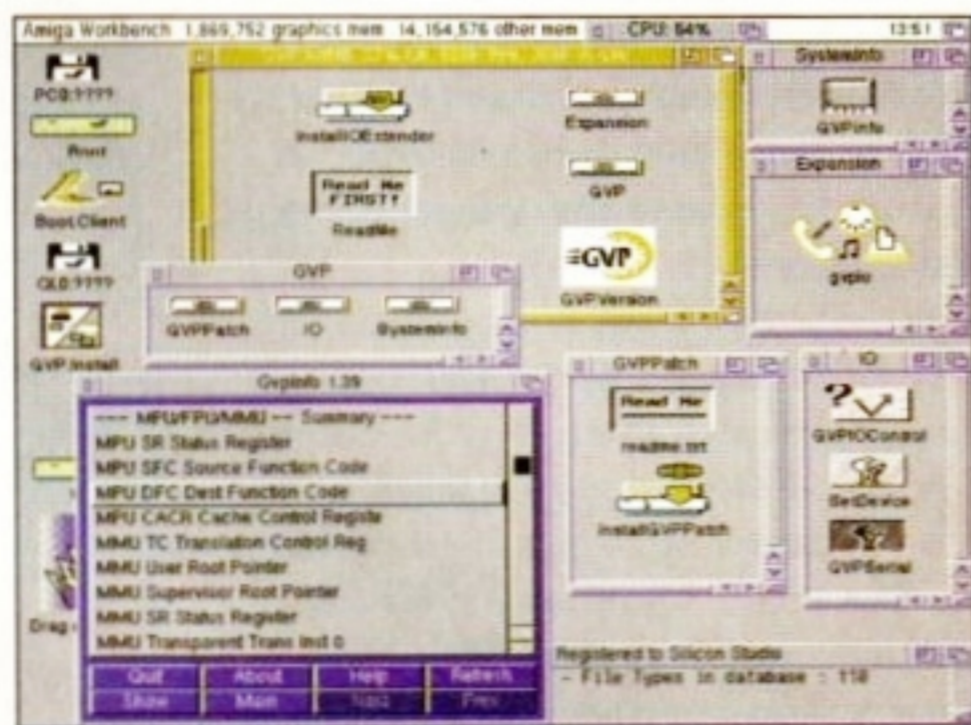
PARALLEL PORTS

Parallel ports were devised in the 1970s to connect computers and printers. They're mainly used for output, but they can read data, given appropriate software. The Amiga parallel port is commonly used to read 8-bit audio samples and digitised images from scanners.

SERIAL PORTS

Serial ports work with longer cables, but speed suffers as they transfer just one bit at a time.

This screen shows some of the GVP tools in action. It may be necessary to run the patch program for best results.



The IO Extender has its own Prefs program, with which you can even set a custom baud rate for specialist applications.

They can connect printers and plotters but are more often used with modems. This becomes a demanding

application as modem speeds increase.

Serial ports can also send and receive notes and control information for synths, sound processors and keyboards. The standard for musical signalling is called MIDI (Musical Instrument Digital Interface).

MIDI adapters for the 25 pin Amiga serial port are cheap and widely available, but existing MIDI programs often talk directly to the hardware, with no support for extra ports.

TESTING

Both the products are Zorro 2 cards, which work on any Amiga with internal Zorro slots. They come with software drivers which must be installed into a Workbench 2 or 3 system to bring the board to life. Both suppliers use the quick and friendly Commodore installer.

Once the software has been loaded by the BindDrivers command in your startup-sequence, programs can select the interfaces by name. Rather than Commodore's parallel.device and serial.device, the interfaces are known as gyppar.device and gypser.device, or pit.device and duart.device for the BSC board.

Utilities let you tweak the serial configuration and intercept attempts to open a device, substituting a new name and unit number. This is a neat way to make programs which call for a Commodore interface use a Zorro one, but it handles every request the same way, limiting its usefulness.

The back panel of each board has room for a 25-pin parallel connector,

like the standard Amiga one, and a cut-down nine pin serial connector, which carries the essential signals but lacks some embellishments of the original RS-232 and Amiga implementation.

The nine pin socket is a cost-cutting measure from the PC market. Modern mice, tablets and modems often come with the required cable, but standard serial devices will need a 25 to nine pin adapter. There's no room for a second serial port on the back panel, so it is routed to a connector on the Zorro card inside the Amiga.

BSC MULTIFACE 3

The Multiface 3 card was designed by BSC in Germany, since taken over by AB-Union, and manufactured in Taiwan by AlfaData. It's a small card with a simple, rather old-fashioned design, using socketed Motorola interface chips and a handful of 'glue' logic parts to convert them to the Zorro 2 standard.

BSC supply the best parallel port software. This includes *Pitnet*, a version of ParNet re-coded for the Multiface port, and a driver for Epson parallel port scanners. The serial ports are adequate but not exceptional, running at a top speed of 115200 bits per second. The second port uses a proper 25-pin connector on a flying lead, unfortunately clogging another Zorro card edge once installed.

The Multiface documentation is a neat, well-printed paperback book, with about 90 pages of English text and diagrams.

It's clear and well written, only lacking in two respects – it does not explain the hardware port mapping, for people who might wish to use the board from other environments like Unix, NetBSD or Amiga Qdos, and there is very little information about MIDI, although MIDI support is claimed on the box.

The book says that a timing crystal soldered onto the board must be changed before the Multiface 3 can work at the peculiar MIDI speed of 31250 bits per second. I followed the instructions, but could not select the

MIDI rate. Phone calls and email messages to AB-Union in Germany went unanswered. I cannot recommend this board for MIDI applications.

GVP IO EXTENDER

GVP's Input Output Extender is slightly bigger and more complicated, assembled in the USA with modern surface-mount techniques. It's a good looking board, although some features, such as a ROM socket and RS422 'feature connector', have not been implemented.

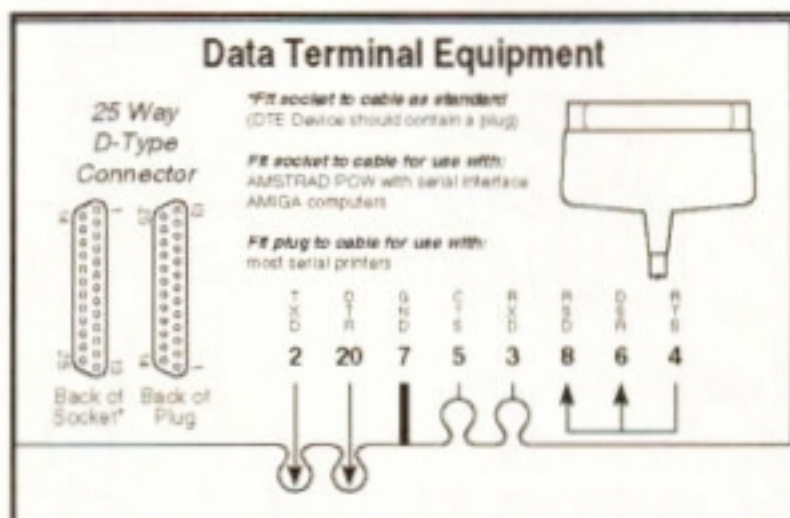
GVP let you re-direct port requests from the Workbench. BSC require shell commands, but they do not support parallel port networking or scanners. This parallel port is strictly for printing.

Power Computing's PowerScan only works with the motherboard port, even though it comes from the same firm as the IO Extender! At top speed the GVP serial ports can rival Parnet, when used with PD Pronet software, but it's not included and you'll require an IO Extender at each end for full speed.

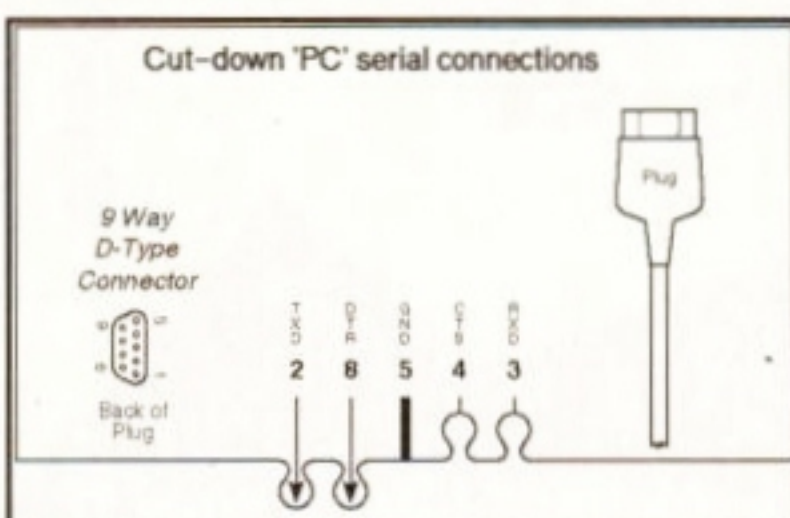
MIDI is supported by the GVP board – you just select the required rate in the serial preferences – but I've never seen an Amiga MIDI interface with a nine-pin connector. Power Computing offers nine or twenty five pin sockets for the second serial port, as an optional extra.

The GVP hardware is impressive but the documentation is not: a stapled bundle of uneyen photocopied pages, vague and poorly printed. The key information for anyone hoping to write alternative hardware drivers is provided in a disk file, but that's your lot. You'd also need a copy of the manual for the StarTech interface chip which handles all three ports, which I found, albeit in Amiga-unfriendly PDF format, on the StarTech web page.

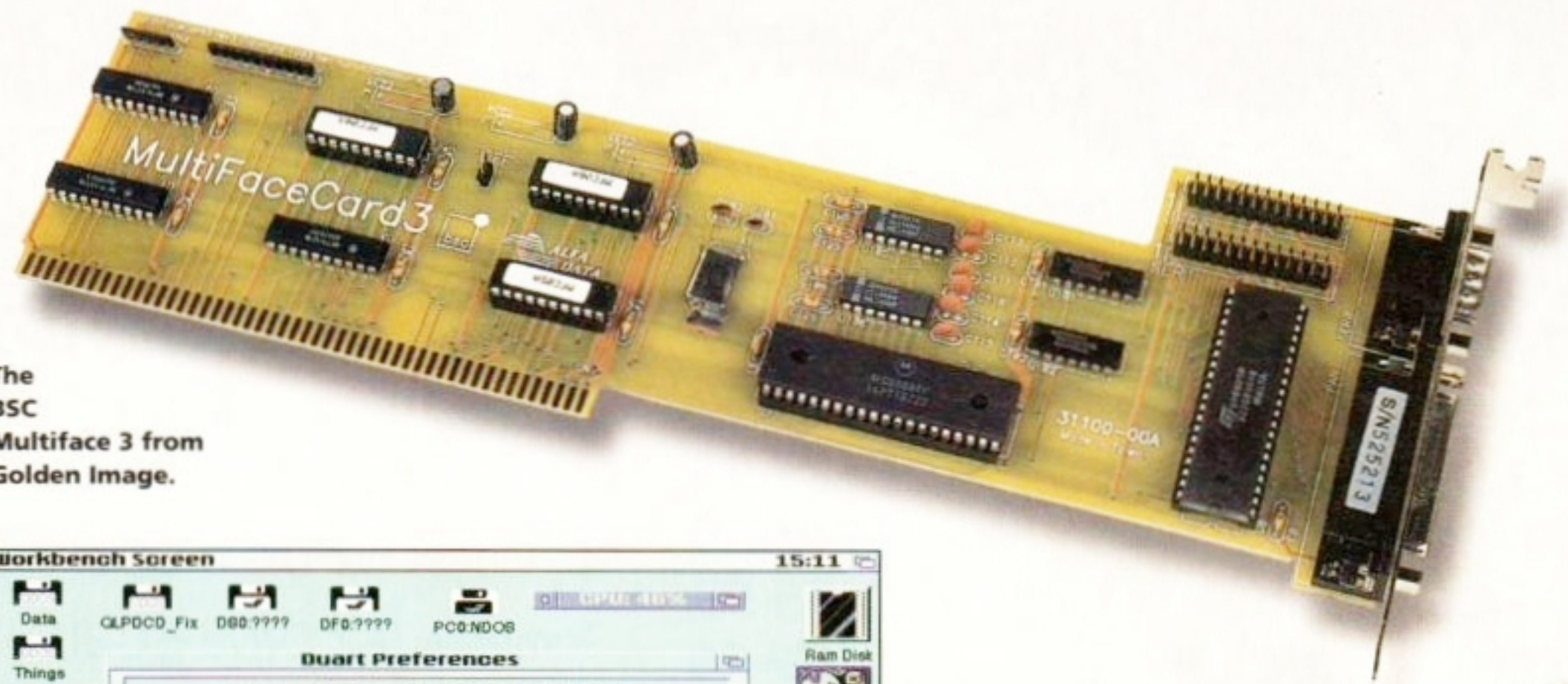
The StarTech's top speed is an impressive 614400 bits per second. It has 16 bytes of buffering on each channel, reducing the risk of data loss and the load on the main processor.



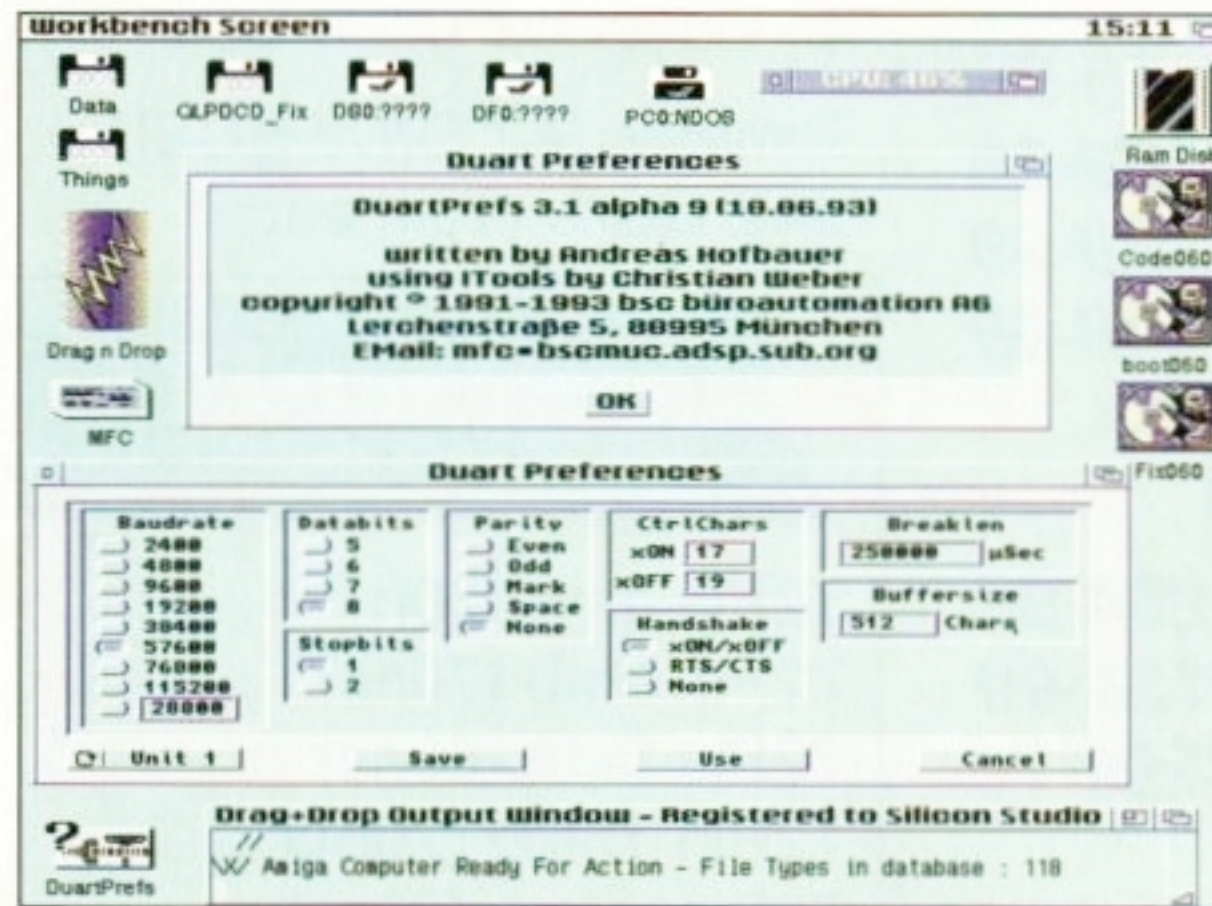
The 25-pin serial port is standard on the Amiga and most modems.



The 9-pin serial port became popular with laptops, and now many PCs and PC peripherals use them.



The BSC Multiface 3 from Golden Image.



The software included with the BSC card includes the usual preferences programs, and a rather excellent special version of Parnet.

Some other Zorro boards cause problems by blocking interrupts during drive access – these include the Cyberstorm 1, Warp Engine, 4091 and some of GVP's own boards. In this case you may need to run 'GVPpatch', which is supplied, to reduce the size of SCSI data transfers during fast serial activity.

Unlike BSC, who provide full pinout details, GVP do not document the 'standard' nine pin serial port. This is generally useful information, even if you do not own an Amiga expansion card, so *Format* romps to the rescue with two diagrams that show the 25-pin and nine pin connectors.

The DTE one is the original RS-232 standard, used on Amigas, Atari STs and older PCs. The nine pin one is used on later PCs, laptops and SAM micros. Each diagram is a 'jigsaw' piece so you

can fit two together – whether the same or different – to find out how to make a cable to connect a pair of ports. The diagrams come from Mark Swift's documentation for Amiga Qdos 3.20.

CONCLUSION

There's nothing to stop you filling up your machine with these cards if you run a bulletin board or simple network, and need lots of serial ports – but there's another option which requires less Zorro space. The new Spider interface provides eight serial ports on one card, with its own RISC processor. We'll be bringing you a review of the Spider very soon.

Most people will be happy with just a printer and one or two extra serial ports, and in that case, either the Multiface 3 or I/O Extender will serve you well. BSC have the edge in parallel port handling, thanks to the extra software they supply, while the GVP board has superior serial interfaces and is cheaper if you can get by with a lone nine-pin serial port. They're compatible if you want both at once.

Support for other operating systems is lacking, and both firms need to sharpen up their technical support but both products are reasonably priced and fill a real need.

GVP IO Extender
Distributor: Power Computing
01234 273000
PRICE: £69.95 (2nd serial connector £10)
REQUIREMENTS: Any Amiga with internal Zorro slots

SERIAL: ●●●●●
Fast, buffered, MIDI.
PARALLEL: ●●●●○
Just for printers.
MANUAL: ●●●●○
Power's Achilles' heel.
VALUE: ●●●●○
Cheap by Zorro standards.
OVERALL VERDICT:
Serious Serial ports at last!

76%

BSC Multiface 3
Distributor: Golden Image
0181 900 9291
PRICE: £79.95
REQUIREMENTS: Any Amiga with internal Zorro slots

SERIAL: ●●●●○
OK but unexceptional.
PARALLEL: ●●●●○
Useful input drivers.
MANUAL: ●●●●○
It's almost all there.
VALUE: ●●●●○
Reasonably priced.
OVERALL VERDICT:
Works fine, but no MIDI.

73%

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Magnum 030/40	£129.99
Magnum 040/25	£239.99
Magnum 040/40	£319.99
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A1200 8mb Upgrade	£89.99
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Iomega JAZ Drive SCSI	£Call
JAZ Carts (1gig each)	£Call

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A600 EXPANSION

I've been a subscriber and great fan of your excellent magazine for a good few years now and I could do with some buying advice. I have an Amiga A600 with an internal hard drive fitted by myself, a 1Mb trapdoor expansion and an external floppy drive. I would like a new Amiga but have instead decided to upgrade my current model and wait to see what Viscorp, Phase 5 or whoever have to offer.

I enjoy 3D modelling with your excellent *Imagine 2.0* and *Real 3D Coverdisk* programs and have decided I need more power. I am interested in buying the Turbo 620 from Power Computing. I plan to get the board first and then possibly add 8Mb 72-pin SJMM at a later date, however before I buy the board I have some questions.

1. I already have a 2.5 inch internal hard drive, trapdoor expansion and an extra floppy drive all drawing power from my Amiga's standard 60W power supply. Would I be able to run the accelerator and extra RAM without having to buy a new power supply such as the Goliath or could my current power supply be capable of running both the extra processor and extra RAM? (I don't mind removing the external drive as I don't use it much).
2. If I do purchase the 620 and fit it with an 8Mb SIMM will it disable the PCMCIA interface? I've heard some older A1200 accelerator cards do and I would like to have the option of buying the Surf Squirrel some time in the future.



You really are better off buying a second-hand A1200 instead of trying to upgrade your A600.

3. As the 68000 in the A600 is surface mounted to the motherboard, I've heard that the A620 has to be installed "piggy-back" on top of the processor. If this is true can I still use my internal hard drive? The hard drive in my machine covers up the 68000 and installing the accelerator would surely mean relocating the hard drive.

4. As the Turbo A620 has a "standard 72-pin" SIMM socket does this mean I can use SIMM advertised for PC's such 72-pin, non-parity, 32-bit SIMM? If so what speed should I buy?

6. I have an old IBM PCCC VGA monitor. Can I use my Amiga with this monitor if I buy an adaptor or do I need a multisync PC monitor that will sync down to 15KHz? I don't mind if I still have to use a TV to play games.

Richard Guest
Retford, Notts

1. It's very probable that the existing power supply would suffice. The 68020 used in the accelerator you want isn't renowned for being greedy with power.
2. It shouldn't, as the extra memory is mapped into the 68020's address space and shouldn't overlap any of the space taken up by the PCMCIA port.
3. Yes, the accelerator card clips on top of the 68000. If your hard drive is covering the 68000, you will need to move the hard drive somewhere else. Where, I don't know.
4. Yes, it's a standard SIMM socket which means almost any SIMM should suffice, but don't touch EDO ones. For this speed of accelerator, I'm sure even a 80ns one would do.
5. No, the monitor won't work with the A600. Now for the severe buying advice. Forget the A600. It's too limited. The A600 accelerator card is difficult to fit, and certainly the one I used in my A600 simply didn't work. We were told they were going to be redesigned, but I really don't see how it can get much better: a socket which clips onto another surface mounted 68000 is never going to be reliable. Also, if you don't get any RAM for it, you won't notice much of an improvement at all.

My advice would be to sell the A600 if possible, and buy a second hand A1200 instead. Take the hard drive from the A600 and stick it into the A1200. Use any spare money to get a 4Mb trapdoor memory upgrade for the A1200 (you can't use the A600 memory expansion in the A1200). You'll be much better off in the long run.

MEMORY SHORTAGE

My computer set-up is as follows: A1200, 64Mb GVP hard disk and a Power Computing CD-ROM drive via PCMCIA. As you can see the next item required desperately is extra

CD MEANS PC?

I am thinking of buying a CD-ROM drive for my Amiga 1200. Please tell me if I could use Microsoft software such as Windows or any PC software with an Amiga with a CD-ROM. Can you use personal CD players instead of CD-ROM drives if you get the correct leads? I also have a half Gb hard drive, would this help in the running of a CD-ROM?

David Turpie
Darlington, Co. Durham

Simply buying a CD-ROM drive for an Amiga, does not make it PC compatible. In fact, it's got absolutely nothing to do with it. Instead you need a PC emulator for the Amiga, which makes it act like a PC. Currently there is only one (and I don't mean Highlander) software emulator I'd recommend, called PC Task. It can just about run early versions of Windows and other basic PC software.

No, it's not just a matter of leads. Most personal CD players are not SCSI compatible: they simply don't contain the hardware necessary to connect to a computer. Having a hard drive is commendable, but makes no difference to using a CD-ROM drive.

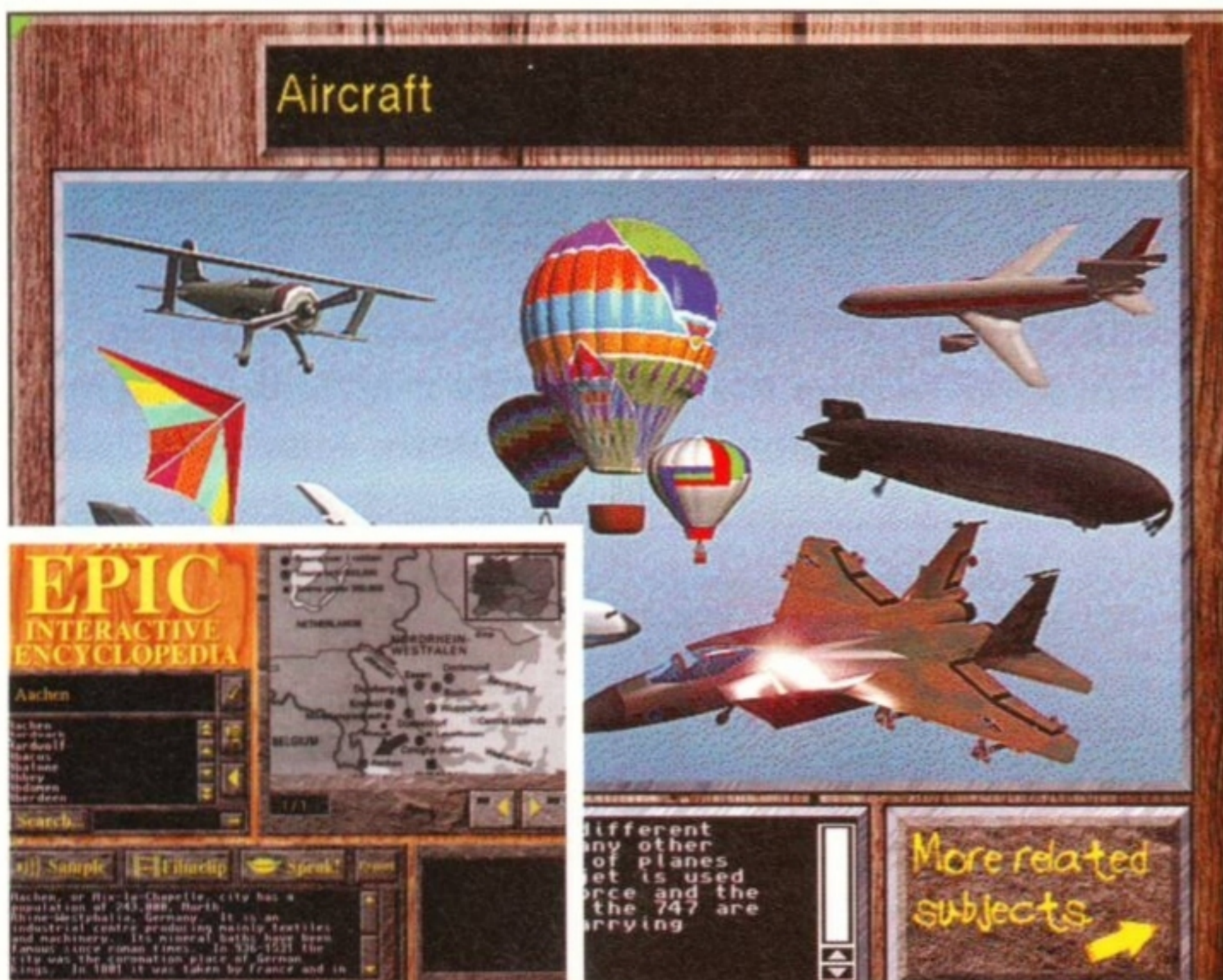


If you want to run PC CD-ROMs on your Amiga then you need to get hold of an emulator.

memory. I purchased an Apollo 1200 with 4Mb RAM installed and tried to install it but it just didn't fit very well and I couldn't put the cover back on. Worse still, when I switched on my Amiga the hard disk spun up but that was as far as it would go.

I tried the jumpers to see if it was the extra RAM and with the CD-ROM drive removed, it made no difference. I sent it back and received

Continued overleaf →



To get the most out of Epic's Interactive Encyclopedia you really need to get your hands on some extra memory.

← a replacement by return with the same problems. I returned this and requested a refund as they could offer no useful advice. My questions are:

1. Is there anything wrong with my Amiga? If so, any ideas?
2. Is the Apollo incompatible with my Amiga? If so, why?
3. Is there anywhere near me where I could purchase an accelerator/memory expansion and have it installed?

4. As I have gone off the idea of an Apollo 1200 (especially as the component layout on the one I received did not look like the picture in Siren's advertisement) any suggestions as to an alternative perhaps with 8Mb RAM which does not clash with PCMCIA?
5. Is there any real advantage of having an MMU?

I hope you will be able to give some constructive advice as I am concerned about being able to use some of the more recent

applications which require memory, such as Epic's *Interactive Encyclopedia*.

Colin Clifford-Smith
Southampton, Hampshire

1. It's unlikely there is anything wrong with the Amiga itself. If there were, you definitely would have seen other symptoms before now. It's possible you didn't fit the memory card properly: it should fit home snugly, and be possible to replace the trapdoor without problems. I've seen some Amigas which seem to require the expansion cards to be fitted "up-side down" in order to work - don't worry, there is a special key which makes sure the card is the right way up for your Amiga - as they seem to have a different PCB. I suppose it's possible that the memory card doesn't fit in your Amiga for this reason, although I have my doubts.

2. It's not very likely that the memory expansion is incompatible. I'd guess at several possibilities: your power supply isn't up to the job (did you try using the Amiga with the CD-ROM drive removed? Does the CD-ROM drive have it's own power supply?) or the hard drive doesn't like the memory expansion. I've seen this happen before with older hard drives: the addition of the memory expansion speeds up the A1200 to such an extent that the older drive can't boot up properly. Sometimes a warm reset gets it running. Did you try using the memory expansion without the hard drive connected?

3. If there are no Amiga dealers around, a competent TV or electronics repair shop should be able to fit the card for you. Mail order is still the best way to get Amiga hardware at the moment.

4. The card in the advertisement's photograph could be an earlier revision of PCB layout, or could use a different colour of fibreglass board: I wouldn't let that put you off. If you want to try a different make there are plenty about from suppliers such as Power Computing (01234 273000) and Gordon Hardwoods (01773 836781).

AMIGA, PC AND APPLE

I would like to partition the PC486 partition of my hard disk to IBM format and install Windows and PC software and run it all via an emulator. I am doing an Open University degree and need access to a PC to complete some of the modules which are supplied with software as part of the course.

I would also like to format a Macintosh partition for Mac use and run Mac applications. Is this at all possible? I was thinking of buying the Dataflyer SCSI interface and connecting a CD-ROM drive so that I could use PC and Mac CDs as well Amiga ones. I cannot use the PCMCIA Squirrel interface as the RAM board is 8Mb and disables this port.

James Bryce
Stirling

For the popular PC and Mac emulation packages, you don't strictly need to re-format a partition. All systems will allow a "hard file" to be created on an existing AmigaDOS partition. This is a huge file (the size of the hard drive you require - for example, 50Mb) which acts as a hard drive to the emulator. It's the simplest solution, but not as fast as a dedicated native partition.

If you are using a PC emulator such as PC Task, it's possible to re-format a partition in PC format. Full details are given in the PC Task manual, and it does make a heck of a difference to performance. It makes it possible to install and run early versions of Windows, but it's still not fast. In fact, if you don't have a 68030 or better processor, it's possible you may finish your degree before Windows finishes booting. As with all software-based PC emulation, it's best if you stick to running older MSDOS style software and not Windows software. Windows takes up too much memory and processor power at the best of times: through an emulator it's almost unbearable.

Mac emulation is much better on the Amiga, as both machines share a common processor. Using the Emplant MacLite emulator or ShapeShifter, you can create a Mac format partition, and again this speeds up data access quite a lot. With 8Mb of RAM you will be able to run a lot of Apple software such as Word and Photoshop, although again a 68030 accelerator or better will help.

Both the PC and Mac emulation systems include device drivers for Mac and PC CD-ROMs, so if you get a CD-ROM drive they'll work with your emulated systems as well as the Amiga.



Emulating a Mac is much easier than a PC because the Mac and the Amiga share a common processor.



Look for the best deal on a Zip drive that you can find and don't worry if it is PC formatted.

5. Yes. An MMU is useful if you want to run virtual memory programs, use debugging tools such as Enforcer or experiment with Kickstart remapping. If none of those things mean anything to you, then there is no real advantage to you having an MMU.

ZIPPY

1. I want to connect an A600 and A1200 together. Can I use a null modem cable? The problem is the two computers are on different rooms, on different floors of my house. Is it possible to run the cable outside the house, as one room is above the other. I estimate the distance from port is about 30 to 40 feet. Will there be any data loss over this distance? I have basic knowledge of networking, so will I have to treat this like a LAN, and use the A1200 as a fileserver? I ideally want to access the hard drive on the A1200 from the A600.

2. I am also wondering if I should buy a CD-ROM drive. I want to spend around £200, but I do not want something that takes around a year to access disks. Also, SCSI would be an advantage, because in the long term, I want to buy a Zip drive, or something similar.

3. If I buy a Zip drive, can I use PC formatted Zip disks, that I saw advertised in the Viking Direct catalogue (business supplies company, for the unknowing)?

4. I also own a Phillips CDi 220 with FMV cartridge. What hardware would I need to buy to let me view video CD movies such as The Hunt for Red October, on the Amiga? Is it possible on the Amiga? I read about the Super Squirrel MPEG pack from Hisoft, but it is only a 2x speed drive. Will it be possible to run this system on my memory situation?

I am also interested in writing to penpals all over the world. I produce a monthly cat disk of my PD software, and I am willing to swap anything!

Stephen Graham
PO Box 8353, Largs
Ayrshire, Scotland
KA30 8HG

1. Yes, a null modem cable is what you need. A good quality shielded cable should be able to stretch for 40 feet, although you may find that you need to drop the baud rate from 19,200 to 9600 or less.
2. Yes, CD-ROM drives are nice. I'd get one if I were you. Use a Surf or ordinary Squirrel and a SCSI CD-ROM drive. You should be able to get a quad speed drive for under £200.
3. Formatting a ZIP drive is not a problem, so don't worry about buying pre-formatted ones. Just get them as cheaply as you can.
4. Hisoft (01525 718181) have a box which will connect to a SCSI CD-ROM drive and play video CDs. (SMD-100 AF91 92%.) This is as close as it gets for a hardware solution (although I think SCALA produce an MPEG replay Zorro card for big box Amigas). There are software only solutions using various PD MPEG replay software, but performance is poor so I wouldn't take them seriously.

video CDs. (SMD-100 AF91 92%.) This is as close as it gets for a hardware solution (although I think SCALA produce an MPEG replay Zorro card for big box Amigas). There are software only solutions using various PD MPEG replay software, but performance is poor so I wouldn't take them seriously.

COLOUR PRINTOUT

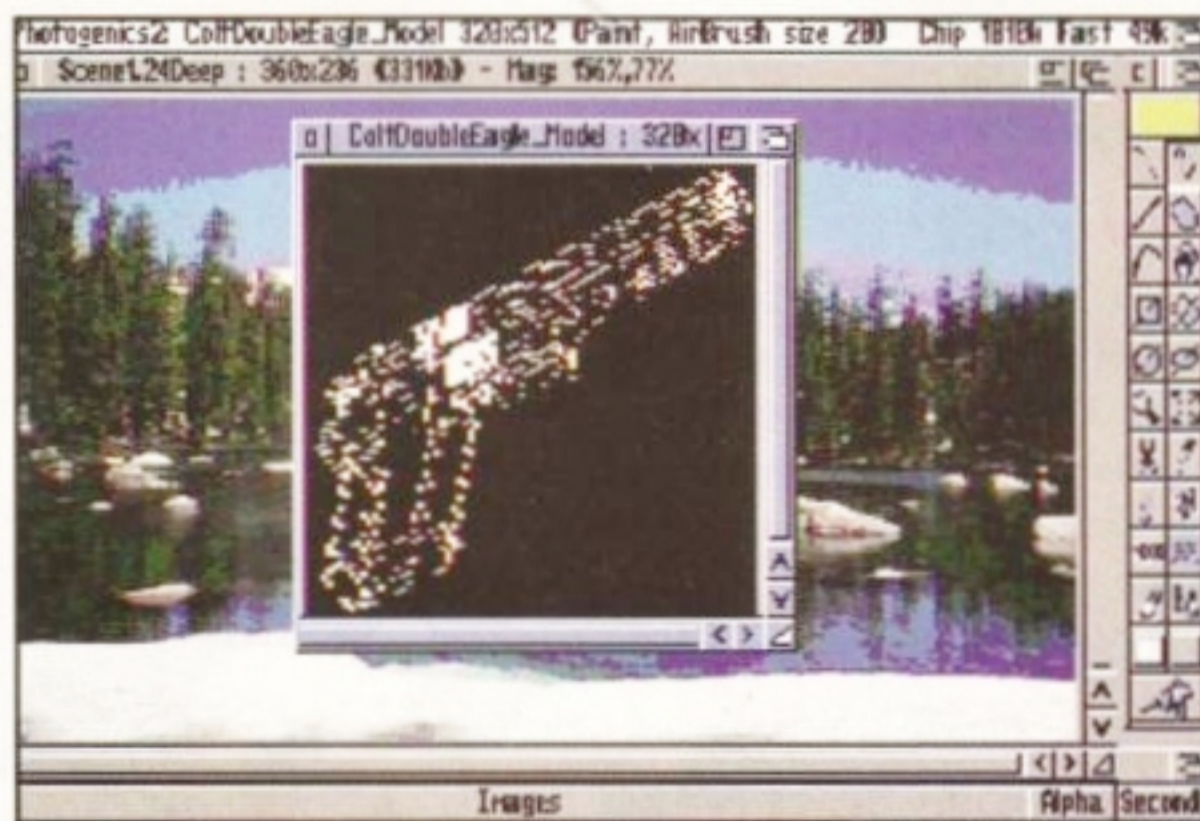
I am interested in taking single frames from my video/camcorder using Pro Grab and then loading these into Deluxe Paint 3, to improve picture quality or to make changes and finally print out a picture via Flexidump 3.

I am looking for a printer that will give near photographic quality. A laser is the answer but rather expensive, please advise on Epson Colour Stylus 500 or IIs and would my Flexidump be compatible. Also should I be looking for more RAM or a hard drive?

Mr. A. J. Vince Stone
Staffs

"Near Photographic quality" is a very fuzzy term. I suggest you visit a computer dealer and see an example dump from some printers before spending any money. That said, the Epson Stylus is one of the best printers around, and you should be able to use it with Flexidump. Contact Eyetech (tel: 01642 713185) as they have a dedicated driver for the Stylus.

Also, Deluxe Paint 3 is very old hat these days. Try Photogenics - it's considerably better. The first version of this package is available free from the Almathera Web site, and the second version is available from most Amiga software dealers.



Photogenics, first released in 1994, took the Amiga world by storm. With the release of version 2 (AF87 89%) it gets better and better.

IF YOU HAVE A QUERY...

At Amiga Format we aim to answer as many questions as possible. Unlike some magazines, we don't just concentrate on our areas of expertise - we take on all your problems (as long as an Amiga is involved).

Here are a few tips on sending in questions:



Graeme Sandiford

- Be concise.
- Detail the problem as best as you can.
- Describe the events that caused the problem.
- Give full details of your equipment.
- Make sure your question is relevant and wouldn't be more easily solved by contacting the dealer from whom you bought the goods.

Bear these points in mind and fill in, photocopy, or copy the form below as best you can. Unfortunately we cannot reply personally.

Send your letters to Workbench, Amiga Format, 30 Monmouth Street, Bath, Avon BA1 2BW.

Your Amiga:

- | | | |
|-----------------------------|---------------------------------|-----------------------------|
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| <input type="radio"/> A1000 | <input type="radio"/> A1200 | <input type="radio"/> A1500 |
| <input type="radio"/> A2000 | <input type="radio"/> A3000 | <input type="radio"/> A4000 |

Kickstart version

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Hard Disk: Mb

Manufacturer:

Extra RAM fitted - type, size, (Mb) and manufacturer:
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Details of other hardware:
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Amiga.net

Darrens Top Seven

Beer, birds and bikes. If, like **Darren Irvine**, your interests are quite simple, you'll certainly enjoy surfing in his footsteps.



Web-based Zine's don't come much funnier or off-the-wall than *Crank*.

NEWSGROUP OF THE MONTH

After several years on and off, of floundering around in the rec.motorcycles newsgroup, trying to wade through the garbage, trying to make sense of the things Americans say, I finally sobered up long enough to notice that there is a UK specific equivalent, called appropriately enough uk.rec.motorcycles.

If you're a biker with access to the net, then you should check out this site, for no other reason than it's pretty funny reading at times. Additionally, if you're one of the few Northern Ireland Amiga users who ride bikes that I don't know of (i.e. someone other than John Kennedy) drop into ni.motorcycles and say hello.

CRANK

This is a site that you really should check out. I'm not usually a big fan of Zines but *Crank* really is something special. It's actually the online version of an underground magazine produced by Jeff Koyen, originally in Philadelphia and now in New York. Quite simply, it has some of the funniest articles and features that I've seen anywhere on the Net.

The feature in *Crank* number four on converting roadkill to explosive devices is particularly hilarious. Mind you, be warned, the subject matter is fairly adult-oriented, so I'd advise you to steer well clear of it if you're bothered by a bit of blasphemy and profanity (personally these are exactly the things that I like about the site).

As well as having hugely funny content, the site is well put together and visually attractive. The only thing I can think of to complain about Crank is that some of the articles from the print version have been omitted from the web site. If you think your sides are up to a serious laugh, then Crank can be located at:
<http://www.btf.com/crank>

TOKYO GHETTO PUSSY

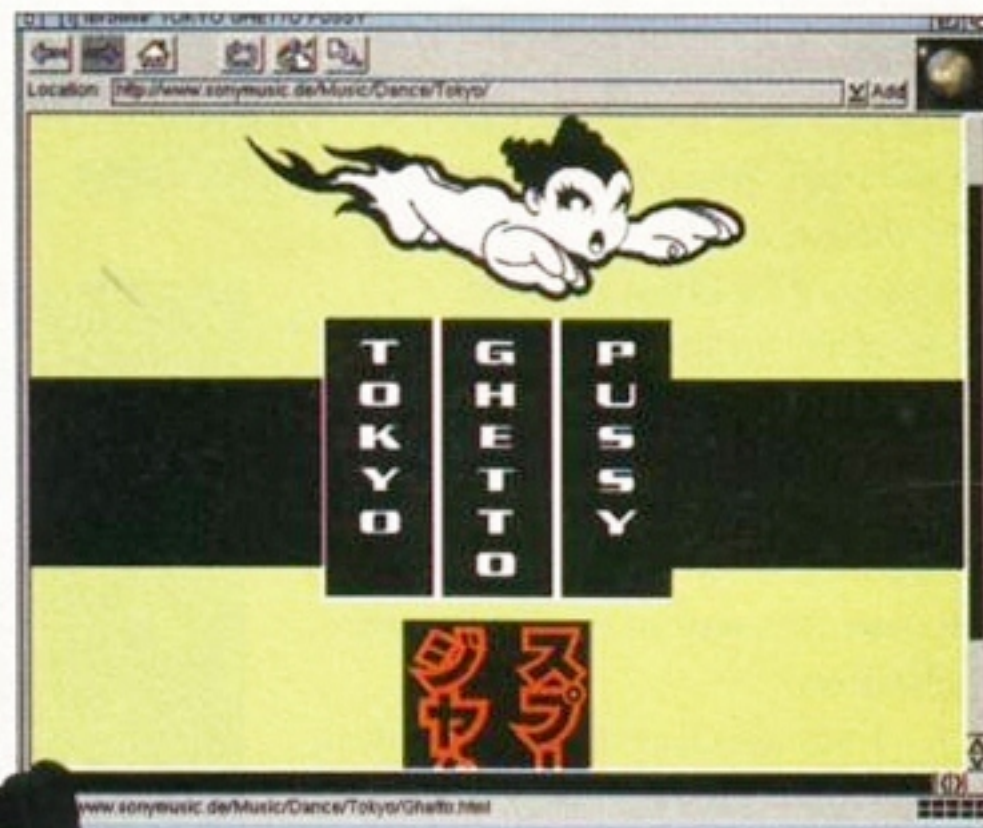
If you like techno then you'll probably have heard of Tokyo Ghetto Pussy. The Japanese girls behind TGP lend their particular viewpoint to pop orientated techno, and even if you're not a fan of this music you should check out this site to take the TGP Ego Test. Check it out at:
<http://www.sonymusic.de/Music/Dance/Tokyo>

CAKE MAGAZINE ONLINE

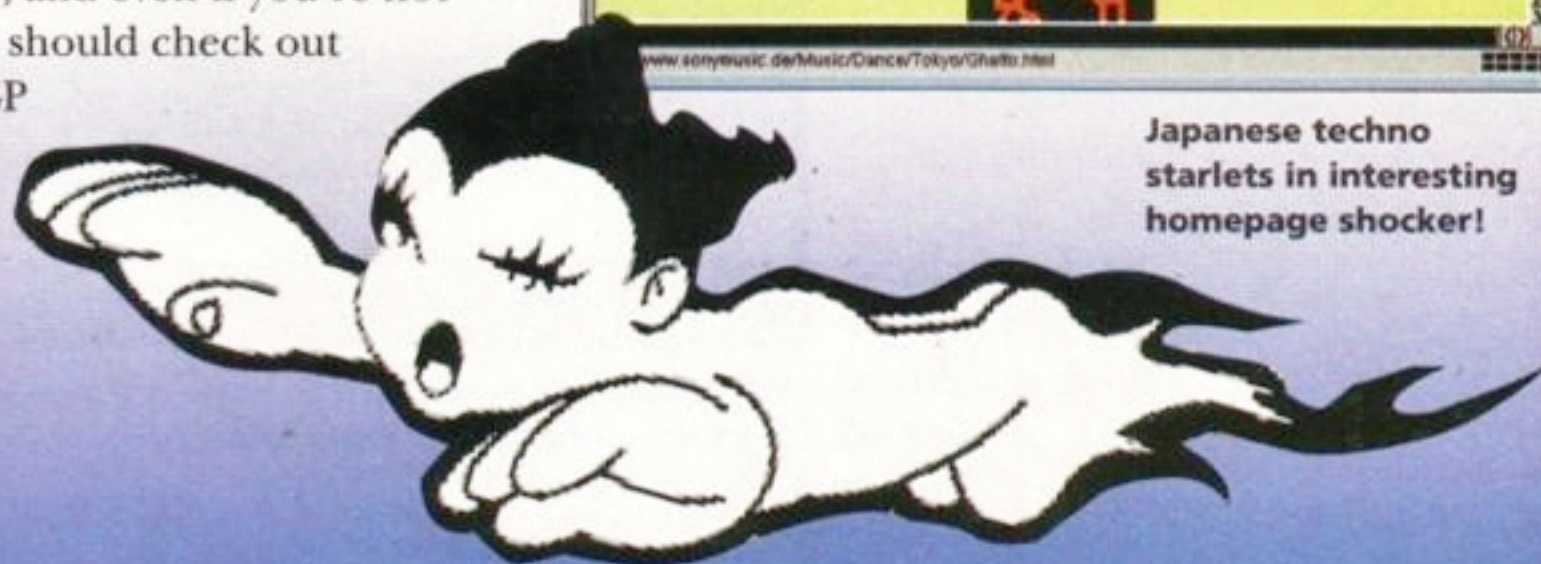
This is another online version of a print magazine, although slightly more mainstream oriented than *Crank*. It has some excellent articles which are well worth reading even if you don't think you'd be interested in the subject matter, which ranges from underground behavioural culture, such as body modification, to music reviews. They even have a few "interesting" fonts that you can download - we used 'Asswipe' for this title.
<http://www.grunge.com>

E.S.INTERGALACTIC'S HOUSE OF DISCOUNT MADNESS

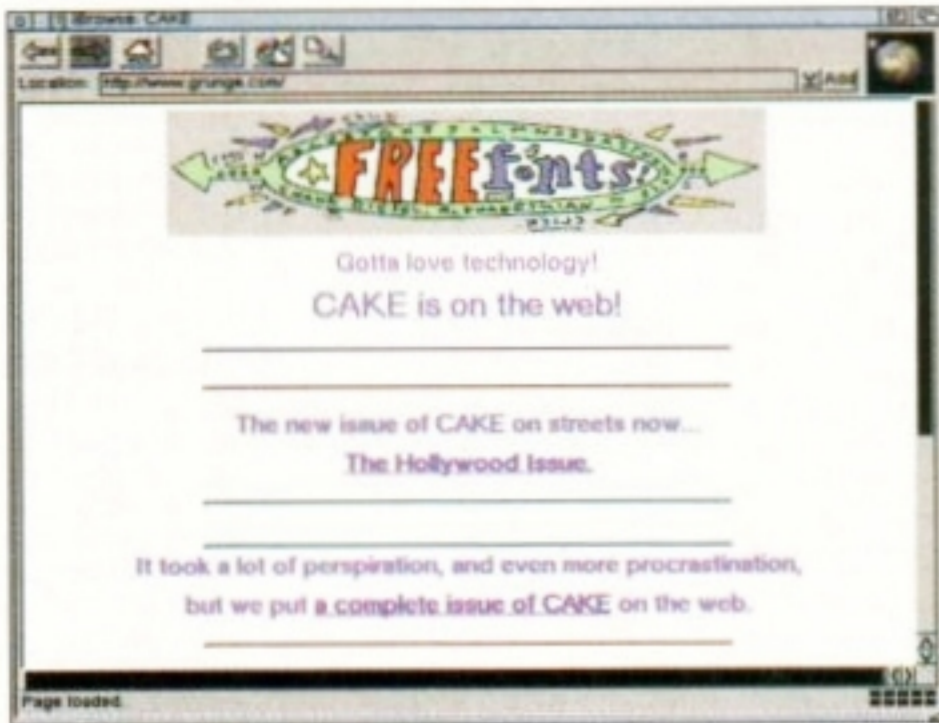
Mr. Intergalactic isn't exactly a friend of mine, more someone who's eccentric orbit



Japanese techno starlets in interesting homepage shocker!



The Return of Usenet Loser of the Month



Cake Magazine is another good read on the web, with a few downloadable fonts to add to the appeal.

occasionally intersects mine. In fact, E.S. isn't the sort of person you would like to call your friend at all, since it doesn't do to get too close to someone for whom life is likely to end splashed across the front covers of the National Enquirer.

Mr Intergalactic's world is one of insanity and perdition, with a serious dollop of the surreal thrown in – just in case you thought things might be too normal. The opening page recommends that the site is best viewed with a "Psychic browser and astral galoshes", and believe me he means it.

If you like what you see on this site, you can catch more of E.S.'s alternative universe babbling on my favourite newsgroup (I'm not going to name it again, in case I land Our Esteemed and Illustrious Leader Mr. Veitch, Sir in trouble with the obscene publications squad – I've mentioned it at least once elsewhere in this Amiga.Net). For the descent into madness, set your browser for the heart of fishness at: <http://www.telepath.com/path/index.html>

ALT.DRUNKEN.BASTARDS HOMEPAGE

What can I say about this page? It's the official homepage of the Usenet newsgroup of the same name, and it is run by my friend Rob "Gonzo" Machado. It has all the information



Not insane enough? Well check out E.S.Intergalactic's house of discount madness for a solution to your problems.

and links you'll ever need to do with drink and drinking on the Net. I beseech you to check it out (and remember to tell Gonzo that I sent you) at: <http://www.primenet.com/~machado/drunk.html>

XXXJOEL'S HOMEPAGE

XXXJoel is one of the most psychotically deranged people it has ever been my pleasure to meet. He is someone I can call a true kindred spirit on the net. If you are not of a squeamish disposition (and can stand a bit of abuse) check out is homepage at: <http://www.bway.net/~xxxjoel>

DARSY'S HOMEPAGE

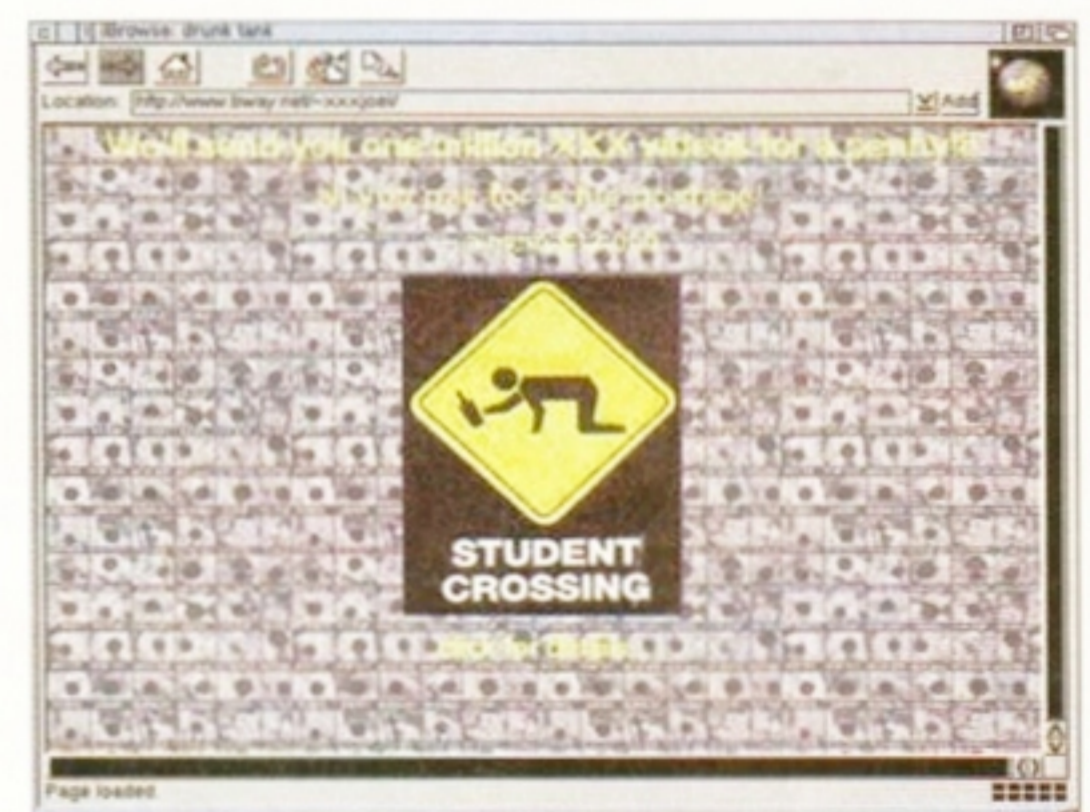
Yes, it's the one you've been waiting for – my own homepage. Far be it from me to be modest, but this page is simply outstanding. You will burn in the fires of hell for eternity if you don't check out this site (yes, I'm desperate for visitors) at: <http://www.geocities.com/SoHo/1352/main.html>

You've probably been reading through this article and fuming to yourself about the self-indulgence of it all – after all who am I to judge your tastes. But my recommendation would be to check out the sites before getting annoyed – they really are all well worth a look.

little specimen going by the name of Tim Sutter. Mr. Sutter (tsutter@erols.com) in his infinite lack of wisdom has taken it upon himself recently to attempt to instigate a cross-posting flame war between three of alt's already pretty bizarre newsgroups: alt.slack, alt.life.sucks, and my own stamping ground alt.drunken.bastards. As well as setting up dozens of pointless crossposts, little Timmy thought it would be a good idea to send multiple copies of the same abusive, foul-languaged messages to the above groups – at the last count some five hundred meaningless messages. Latest news is that Erols (a US ISP) have finally pulled his account, but if he raises his ugly head again, I'll be calling on you loyal Format readers for a bit of support to drive him off the net permanently.



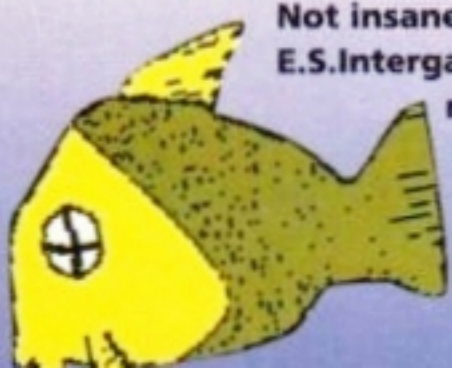
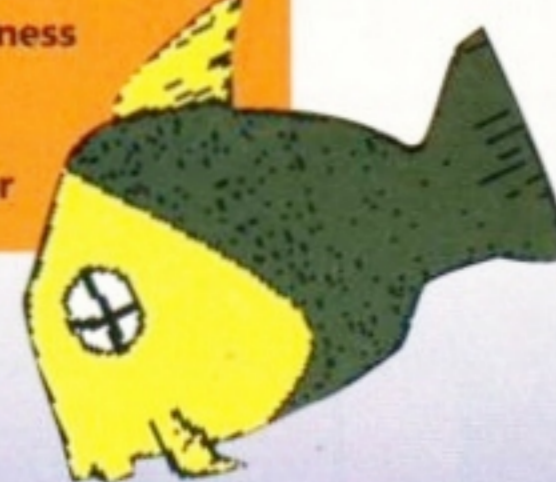
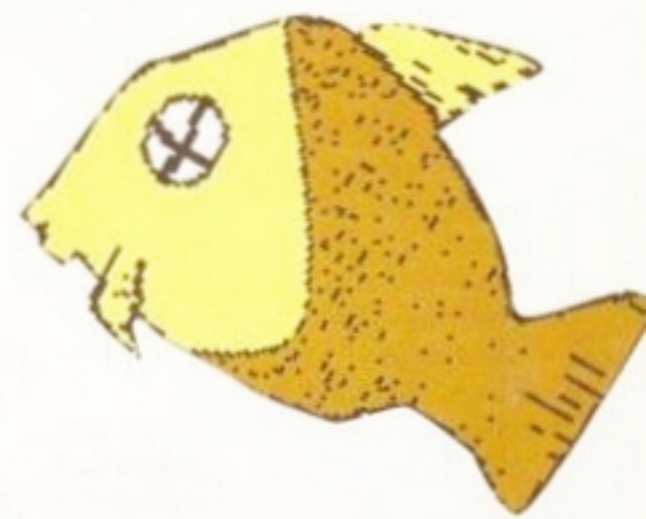
If you're a drinker who has access to the web, then you really must check out the Official A.D.B. homepage.



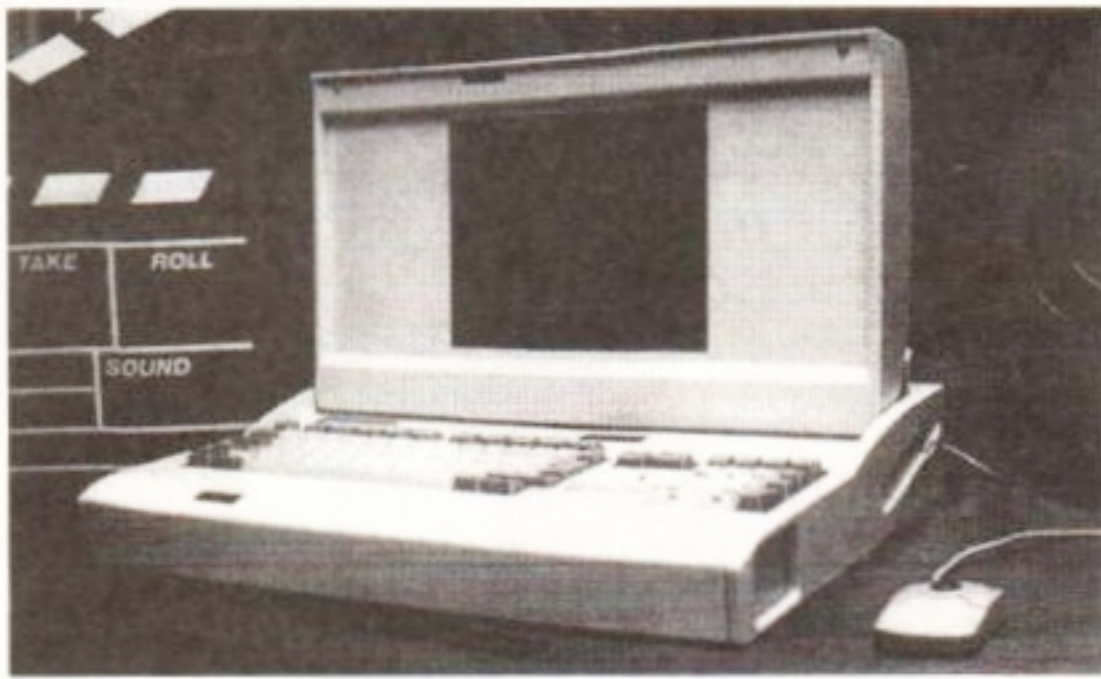
GRUDGING MENTION

A couple of weeks ago I appeared on Meridian TV's Cyber.Cafe programme, talking about certain aspects of the Internet, specifically how it related to getting very, very drunk. They were quite nice about the fact that my associates and I turned up somewhat the worse for wear, and edited the programme so that I only looked a bit of a drunken idiot, rather than a completely useless drunken moron. So for that small kindness they get a mention here. If you feel inclined check out their homepage at: <http://www.meridian.tv.co.uk/cyber>

XXXJoel is a dangerous sociopath, but he's also a friend of mine and he has an amusing homepage.



PAWS 1200 (Portable Amiga Workstation)



The PAWS (Portable Amiga Workstation) kit contains Case, 10.4" Active Matrix LCD, LCD Panel Driver (NTSC and PAL), Laptop Power Supply, Ability to utilize laptop batteries that can be recharged internally (Duracell DR31 NiMH), Microtrackball, Link-It, and APS Power Management Software.

Specifications:

- Dimensions: 18"W x 12"D x 4"H, 11 pounds in weight (Fully Loaded System)
- Power: Auto-switching 110/220V external Power Supply. Internal monitoring circuit for batteries warns users of low power situation and charges batteries when system is off.
- Batteries: Duracell DR31 Laptop Batteries or Compaq Extended Life Battery.
- Battery Life: Average continuous battery life 1.25 hours. Average normal battery life 2 hours.
- LCD: 640 x 480 Active Matrix Colour Panel (10.4" Diagonal Measure)



The Gecko is an external solution to allow Amiga users to utilize standard VGA/SVGA monitors. The Gecko comes with the main unit, power supply, and cable. The Gecko connects directly to the Amiga RGB port and supports many modes.



Specifications

- Approximate Dimensions: 4"W x 6"D x 2"H
- Power: Auto-switching 110/220V external Power Supply.
- Modes: NTSC, PAL, DBL NTSC and PAL, Productivity Modes, and Video Toaster Support.

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Call your favourite
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at the numbers below

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30-42-777
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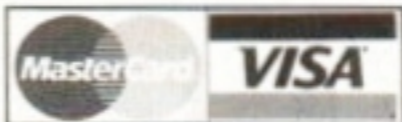
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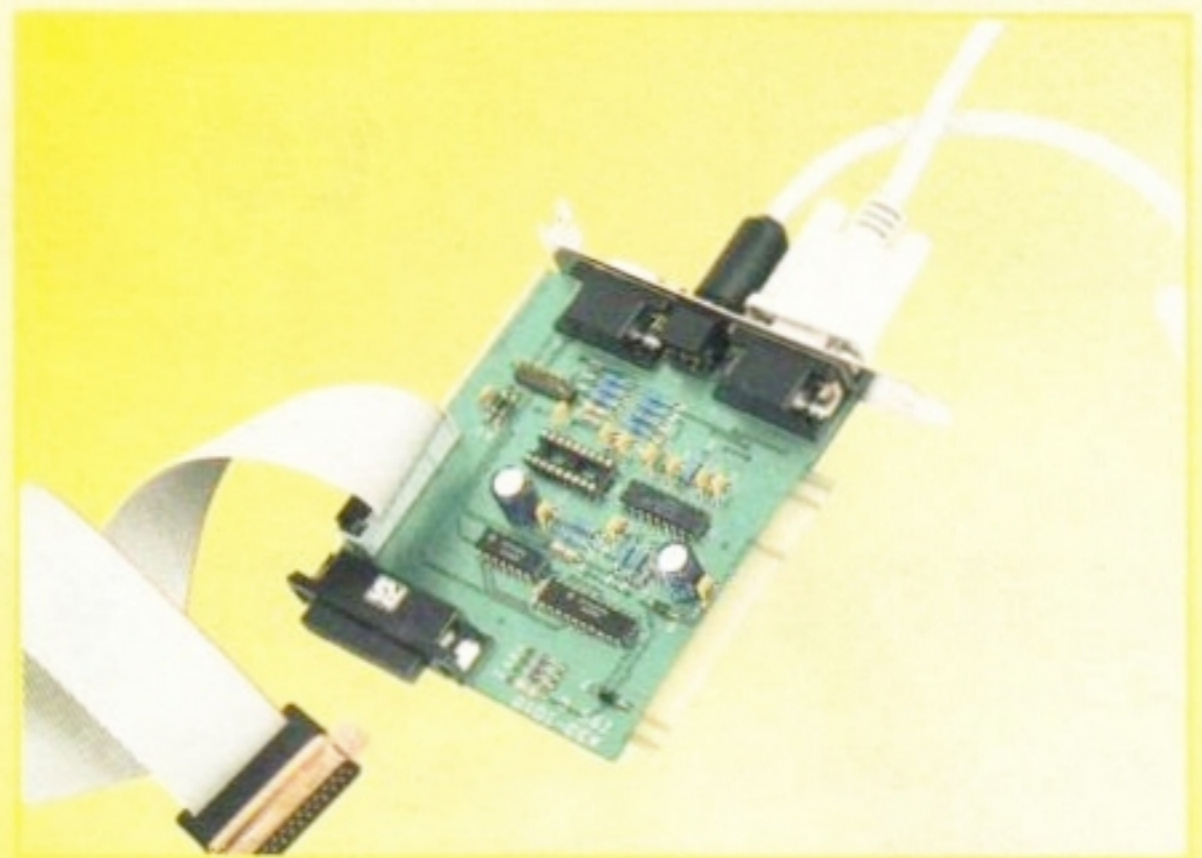
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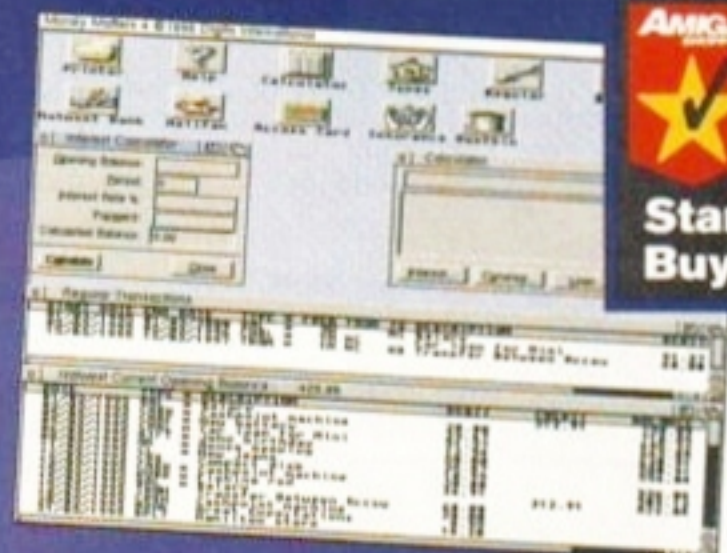


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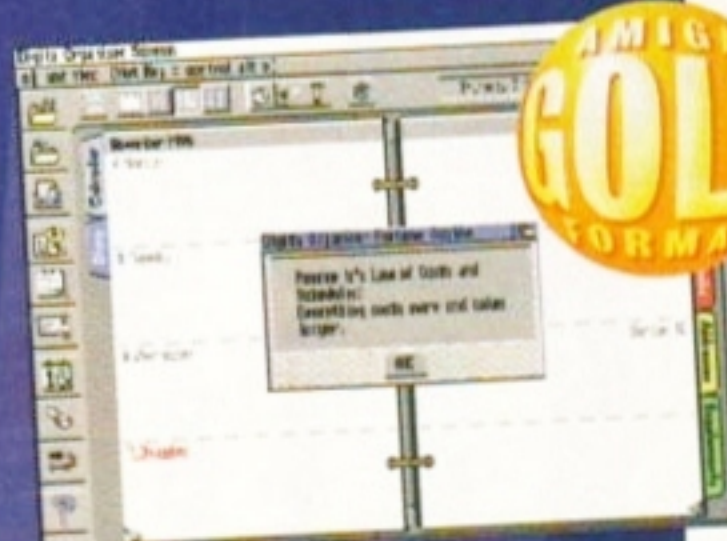
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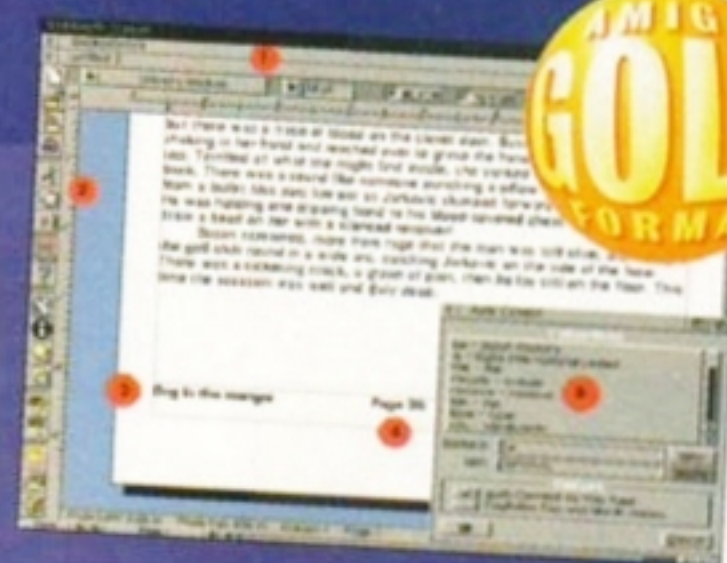
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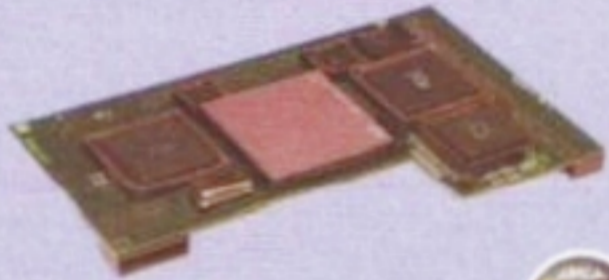


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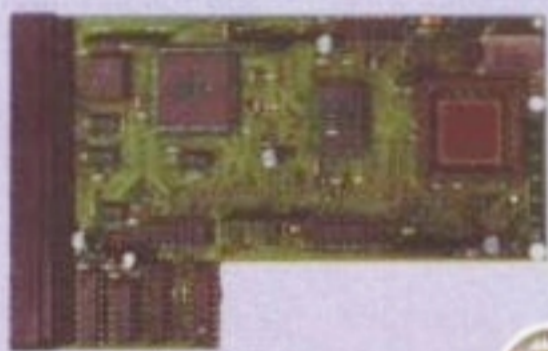
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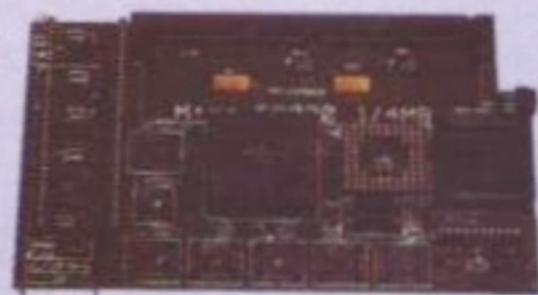
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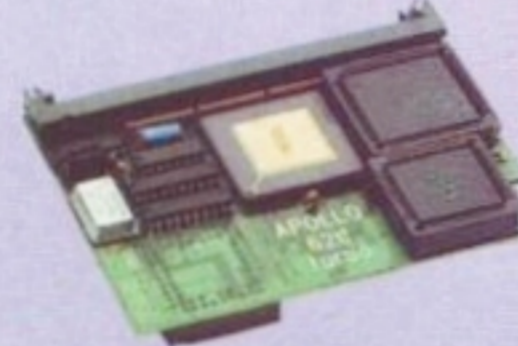
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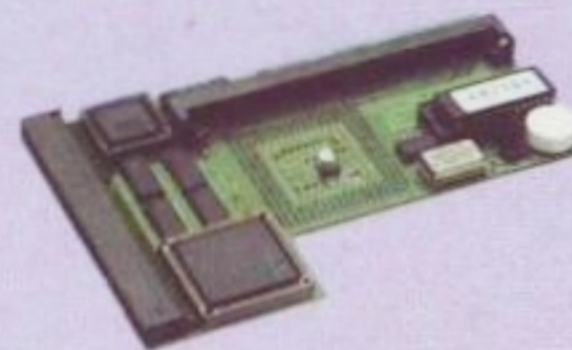
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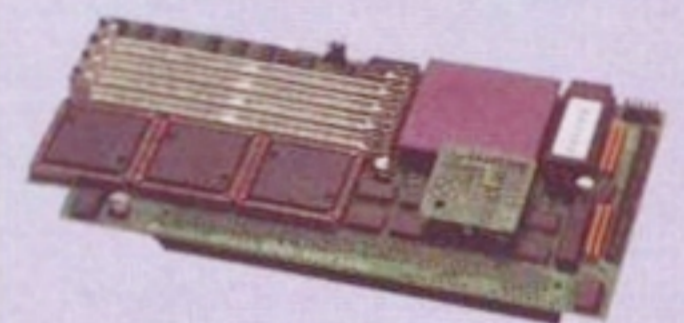
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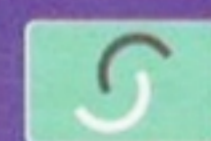
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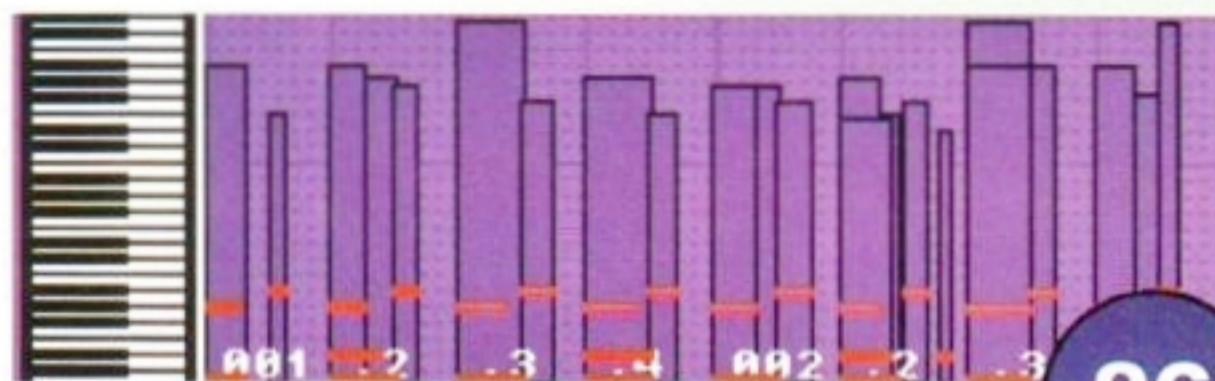
Well, what a lucky bunch of reader's you are. To kick off the new year we have instituted not one but two new series for you. The first of these is a long overdue look at *Music-X*. This featured as an AF coverdisk back in issue 68, and proved very popular due to it's great sequencing and MIDI capabilities. We did run a huge tutorial series at the time, but so many of you have asked us to run more tutorials that we have finally given in, and **Darren** sets out on a quest to fulfil your wishes this month.

Also, we have the rather long overdue second part of a series by **Jason Jordache**, concentrating on creating graphics for games. Jason's work used to appear regularly

Nick Veitch in the Gallery section, and now he has a full time job working for games developers Bullfrog (of *Syndicate* fame) - so hopefully he should know what he's talking about.

Of course, all your regular favourites are still here. **Paul Overaa** will be concluding his look at binary trees, **Graeme** attempts to fly his spacecraft, **Ben** gets all swish with digital video effects and **John Kennedy** is convinced he is still appearing in panto (well, he keeps muttering about "buttons" and things).

That should be enough to keep you going - have a really excellent new year!



86

MUSIC-X

Our brand new tutorial designed to help you get the most from *Music-X*.

DRAWING A WAGE

Have you've ever looked at games graphics and thought that you could do better? **Jason Jordache** has all the advice you need to get started in this competitive industry.



88



90

REAL 3D 2

Real 3D 2 has some really powerful animation tools. **Graeme Sandiford** shows you how to fly your spacecraft in this month's Real 3D 2 tutorial.

SEND IT IN!

We need your input. Is there something that you would like to see covered in one of the current tutorial series? Why not send your suggestion to us at the magazine. Here are some things you might like to think about:

AREXX

Commodore's excellent decision to include ARexx with Workbench was only matched by their stupidity in not documenting it properly. If you are having trouble why not write to us with a description of what you are trying to do?

PAINT PACKAGES

Unsure of how to get a particular effect? Do you think there must be an easier way? Our experts could help.

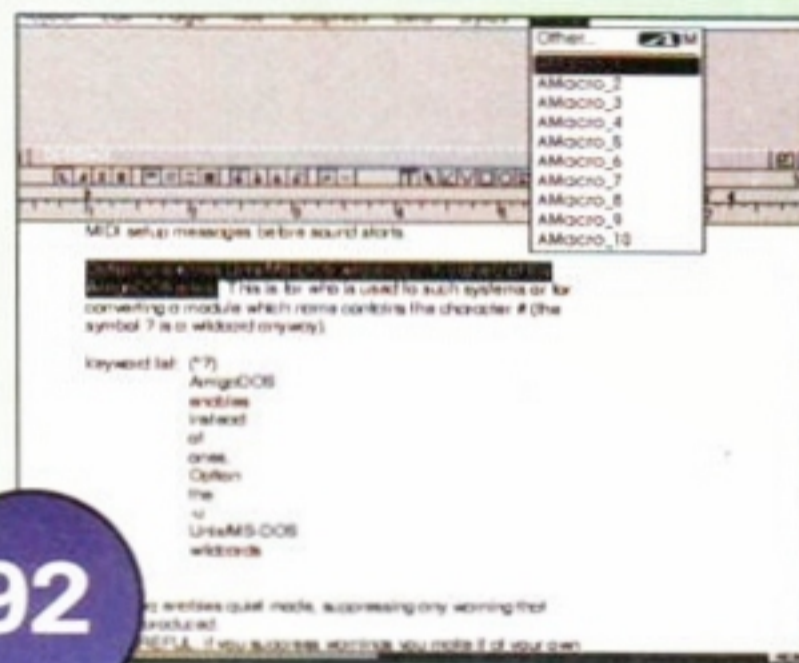
REAL 3D2

Is there some basic model you would like to create but don't know how to? Mr. Sandiford is master of the splines. Contact us at:

AF Creative, 30 Monmouth Street, Bath, BA1 2BW
Or email: amformat@futurenet.co.uk putting "Creative" in the subject line.

AREXX

In the second part of our recursive tree sorts tutorial **Paul Overaa** reveals how you can implement these sort trees into your own programs.

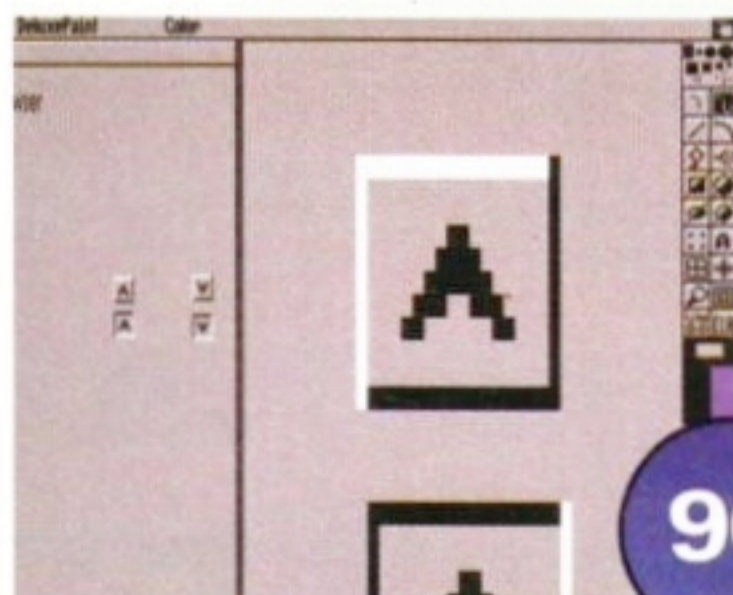
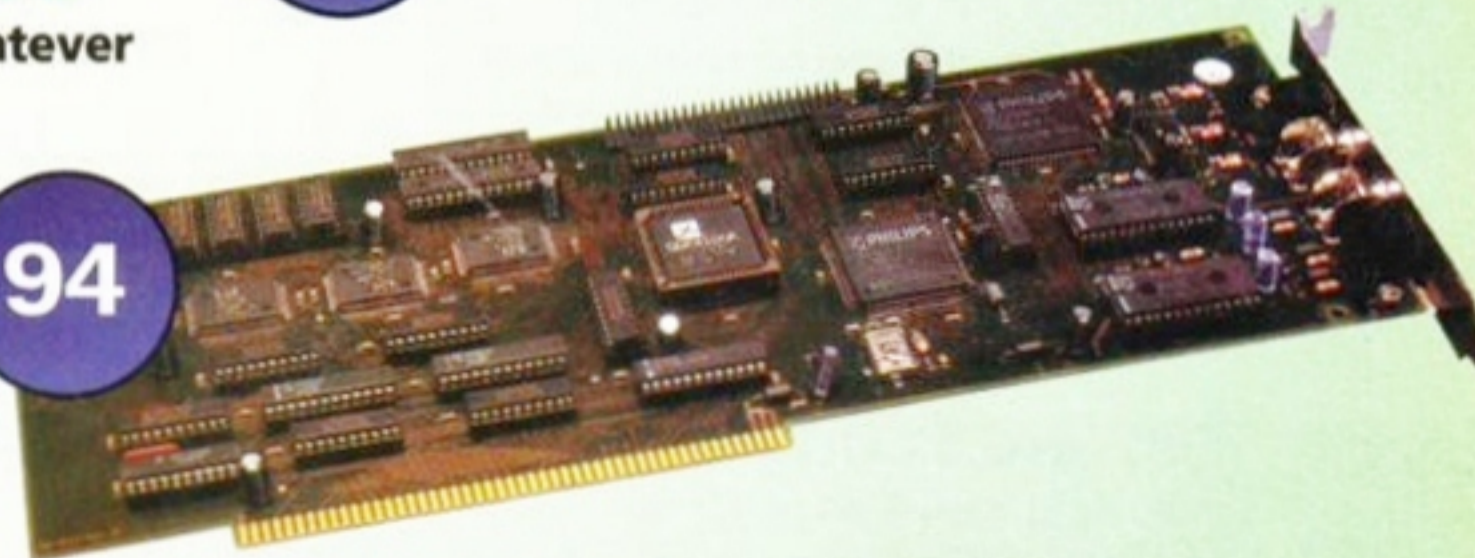


92

MULTIMEDIA

Swipes and shimmys - whatever effects you want to incorporate into your presentation, **Ben Vost** has advice on all the available programs and hardware.

94



96

BLITZ

John Kennedy buttons up and adds even more gadgets and useful controls (or general fiddly bits) to his Blitz browser.

Music-X

Find out how to really get the most out of *Music X* in the first part of our brand new tutorial. **Darren Irvine** is the man who knows his melodies.

CONTENTS

Chapter 1:	Introduction and basic sequence recording
Chapter 2:	Basic sequence editing and creating a song
Chapter 3:	Effects - cross fading & the swing processor
Chapter 4:	Advanced song construction techniques
Chapter 5:	Conclusion - "live" playback & Notator-X



There are other sequencing software packages available for the Amiga but you'd be hard-pushed to beat *Music-X* for sheer enjoyment of use. The current version is 2.0, but older versions (and *Music-X Jr*) share many features. These tutorials will look at getting started with *Music-X*, progressing on to more complex sequencing, and also covering some of the little tricks that can be achieved.

We'll start this month by looking at the most basic aspects of operating *Music-X*: Recording and Editing a single Play Sequence.

GETTING STARTED

Although *Music-X* does support playback of the Amiga's internal samples, as with any other sequencing package, you really need some sort of external MIDI sound module or synthesizer, to make it worth your while.

The basic unit of a *Music-X* song is the Play Sequence, and you can have up to 255 (although this is probably far more than you will ever need). In general, a Play Sequence is a group of

Music-X's screen doesn't look like much to start with, but if you're serious about Amiga music making, you'll come to love it.

bars of MIDI notes. The cunning part of the song construction technique is that a Play Sequence can contain any form of MIDI data, including other Play Sequences. This makes *Music-X* very easy to use if you like to be able to knock out a few different sequences and quickly paste them together into a song. It also lends itself remarkably well to doing different arrangements, or remixes of songs that you have written.

Before you start recording tracks, it's probably a good idea to make sure the metronome is operating correctly. You can choose between the metronome playing an internal Amiga sample, playing a specific note on a specific MIDI channel, or not playing at all. Do this by clicking on the screen line where "Metronome Sequence" is displayed, on the bit that says INT, EXT or OFF.

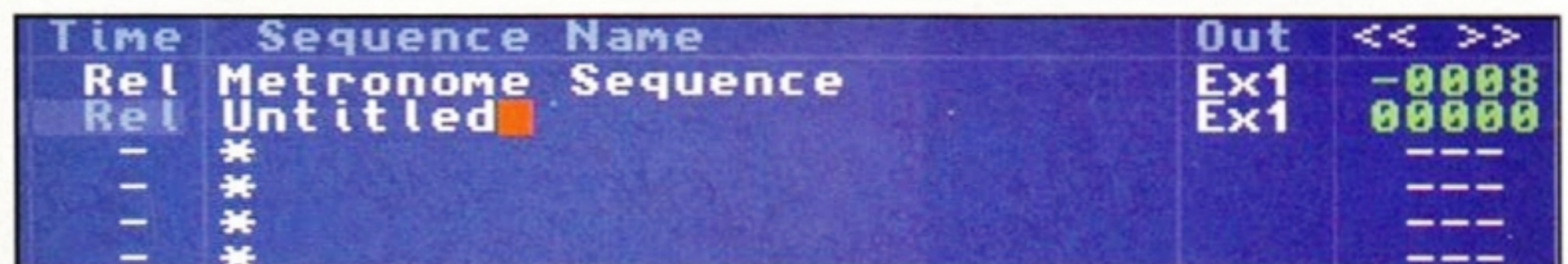
RECORDING A PLAY SEQUENCE

Click on the BEGIN button to make sure that you start recording from the beginning of a sequence. Click on the REC and then GO and the metronome will count you in for two bars, then record everything you play to the work buffer. Play a simple kick and snare rhythm just to get started, and when you have finished, click on STOP.

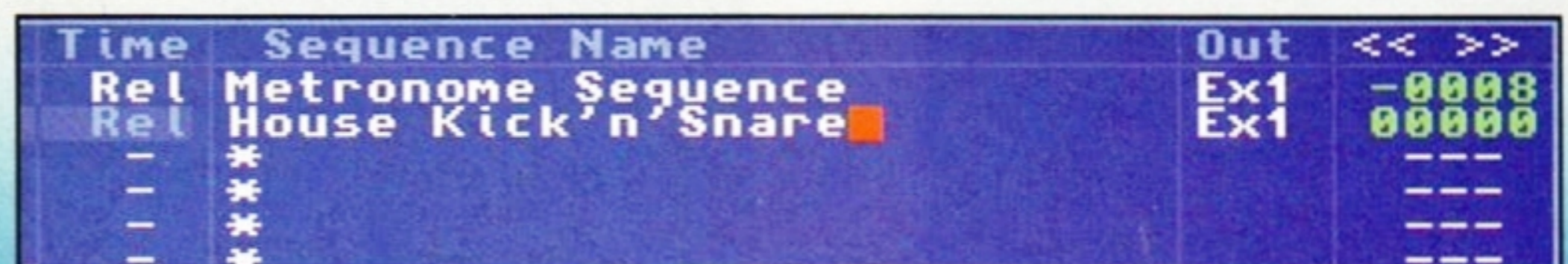
Now click on the line that represents the Play Sequence location that you want to store your track in. When it's highlighted click on STORE. Give it a meaningful name by clicking in the description area (underneath where it says "Metronome Sequence") and type in the name you want.

EDITING A PLAY SEQUENCE

When you have recorded and stored a Play Sequence, the next step is to move



When you first record and store a sequence, Music-X gives it a default name of 'Untitled'...



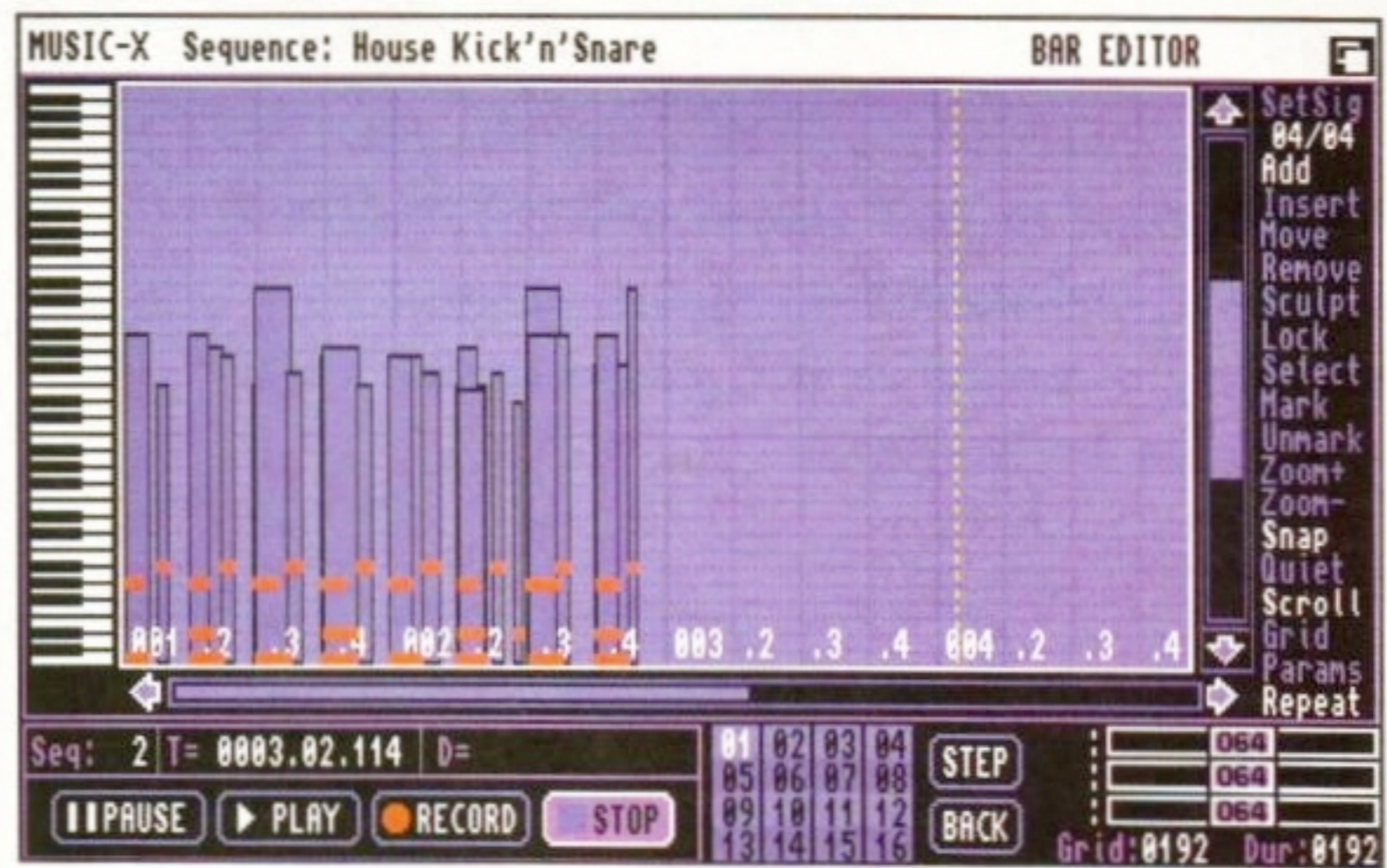
...This isn't very useful - giving your Play Sequences meaningful names will make things a lot easier later on.

to the *Music-X* editing screen – even if your timing is perfect, you'll still need to tidy up the end of bar marker. Highlight the sequence that you have just recorded (single click on it), and hit EDIT.

In addition to the piano keys down the left hand side of the purple screen, you will see a number of coloured dots (the actual colour of which is determined by the MIDI channel on which you recorded the sequence) and blueish/purple bars. The position of the dots represent the note played and the height of the bars represents the key velocity with which the note was played (i.e. note volume).

This is *Music-X*'s Editing screen. The red bars represent the notes that you have played, and the height of the blue columns reflects the note velocity.

Use the Grid Size requester to set the resolution for note movement and duration within the Editing screen.

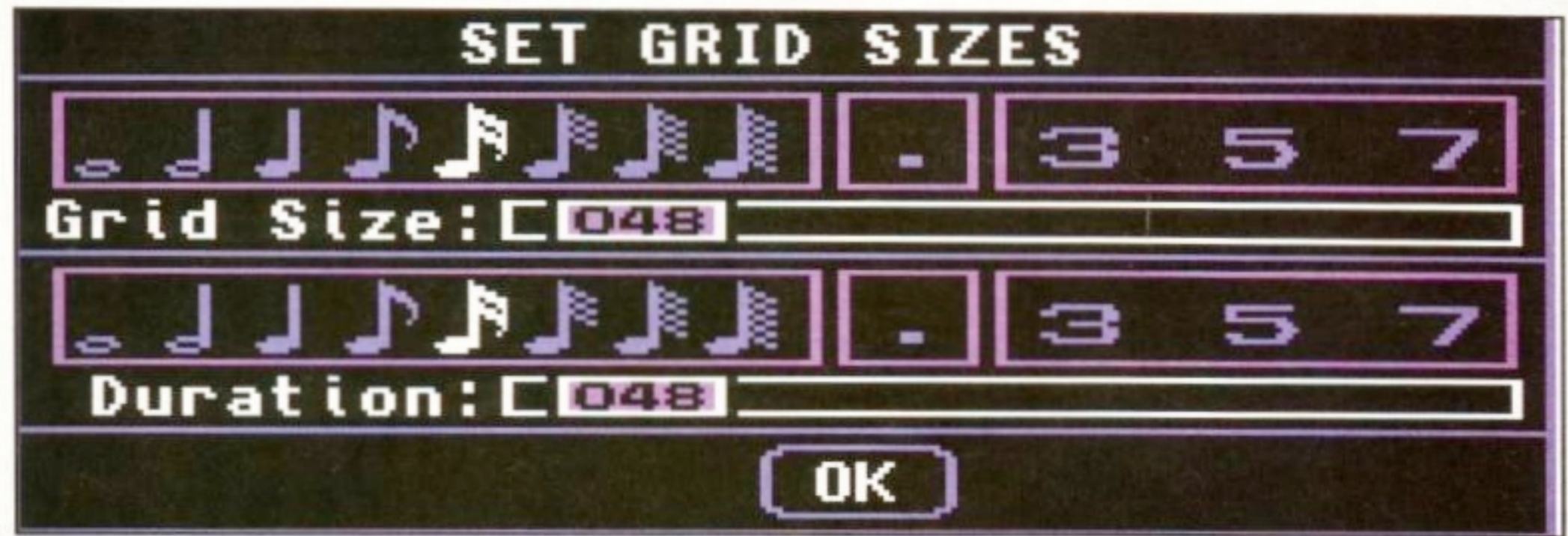


GRID CONTROL

Before you go any further, it's a good idea to familiarise yourself with the Grid tool. This changes the size of notes that are affected by processes such as quantise, and it also changes the resolution to which you can move existing notes or add new ones.

When you click on Grid, you will see a requester that allows you to separately pick the resolution of note placement, and of note duration. Probably semiquavers are about right for most sequences, so click on the Semiquaver icons (a value of 48), and then on OK. If you have recorded a lot of little fiddly flourishes you may well need to set a finer note resolution.

You can playback your sequence by clicking on the tape-recorder like play control. If you find that one or two notes are incorrect, you can simply move them by first clicking on Move from the list on the right hand side of the screen, and then drag and drop any note that you wish to move. You could



The Quantiser is your friend. It is pretty much invaluable if you want your sequences to sound good.

tidy up the timing of all your notes in this way, but it would just a little bit tedious, and of course as with all sequencers, there is an automatic way of doing it, which brings us to...

QUANTISATION

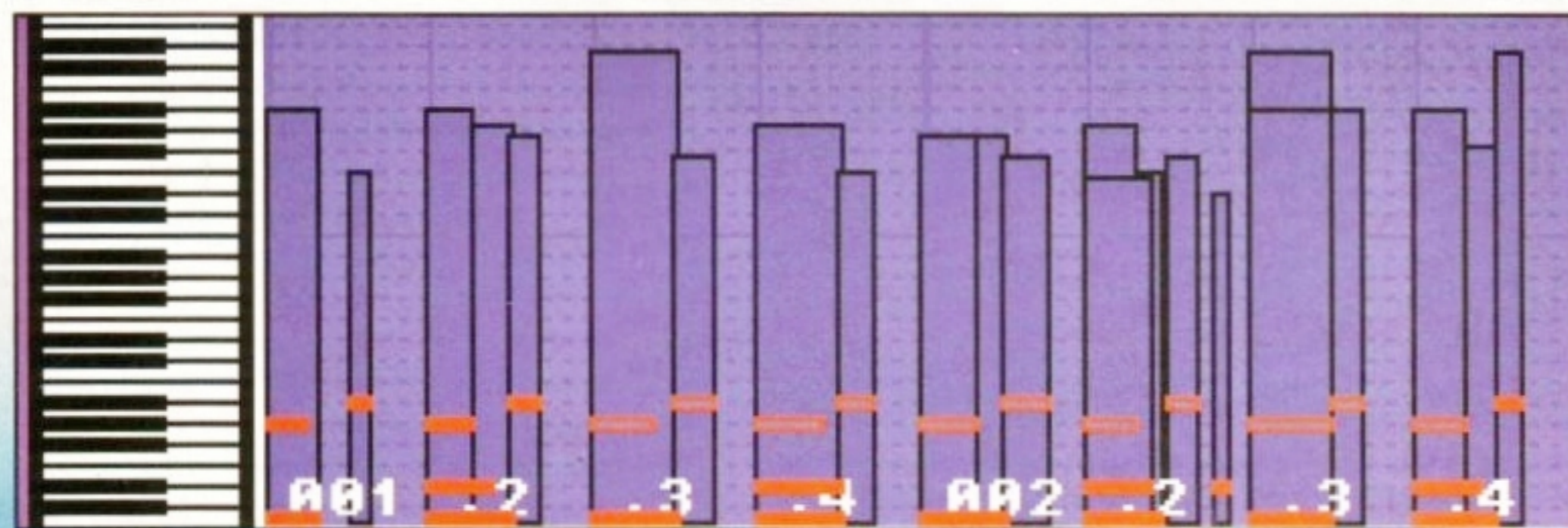
If you're a ham-fisted keyboard player such as myself, the Note Quantisation tool will be your saviour. Bring up the Quantisation requester by using the

quantisation option from the Modules pull-down menu. You are given various choices relating to which conditions to quantise, but for the most part, use "Start w/duration" to quantise the position and lengths of your notes. Select "Entire Sequence" to quantise all your notes, and then click on OK. With a bit of luck (and some reasonable timing in the first place) your sequence will now be perfectly timed.

If you only wish to quantise part of your sequence, then you can do this too: click on "Select" from the options on the right hand side, and drawing a box around the desired notes. Do this in much the same way that you would select multiple items on the Workbench, by clicking in one corner of an imaginary box surrounding the notes and dragging to the opposite corner. The selected notes will appear to become hollow. If you make a mistake in selection, use UnMark and start again. Then, when you use the quantisation option from the menu, click on Selected Notes before clicking on OK.

With a bit of luck you will now have a perfectly recorded and timed Play Sequence. Next month we'll take a look at some of the other options available within the Editing Window, and we'll also be covering how to go about linking together your Play Sequences into a meaningful song.

"If you're a ham-fisted keyboard player like myself, the Note Quantisation tool will be your saviour."



If you only want to perform quantisation (or any other operation) on part of your sequence, use the 'Select' option from the list on the right of the screen, and highlight the notes you want.



Drawing on a Wage

Think you've got some artistic talent? Jason Jordache has some advice on getting started in the computer graphics industry.



Get the ideas of your work in perspective – try to focus on a goal. Before you start creating some graphics work for the games industry it's important to look through the computer mags in the newsagents, and your own collection of games

software to think about the variety of gaming genres on offer. You should soon get an idea of the styles of graphics you may find yourself creating. It's very important to find something you enjoy whether that be cutie platformers or characters of a more twisted nature.

While it's ideal to have as large a collection of drawing methods and styles as possible, if you're trying to create something that bores then you could be setting yourself up for months of tedium.

GET CARRIED AWAY

I was lured by the excitement of games playing, somewhat mistakenly projecting that image onto actually creating games. On reading an article covering a guy who was into graphics and thinking, I could draw that, I gave him a call. Nice guy, he sent me a bag load of his work and I promised in return to send him some of mine in a week or so when "I'd finished a couple of projects I was working on." Meaning I hadn't anything to send at the time.

Grabbing an A3 pad I began to sketch. This is an organisationally wise move, because from there you can pluck out the best bits, transferring them to screen – i.e. your

sketches might only be brief, or detailed and coloured to a point of quality where straight scans can be made (though always touch them up – at the very least remove the ring of pixels from around a scanned sprite). I chose side view sprites and screens because they came naturally, fitted perfectly with certain gaming genres and perhaps most of all were easier than three



quarter perspectives and 3D. Those on this page, made in *DPaint 3*, are samples from a cutie platformer and a different style for a scene with rocky walls with platforms for the mouse character I was working on to walk over. I seem to remember the sky in the mouse platformer being a fluke. I don't normally use the smears, blends and other colour modes as I find them largely useless, but one of the few exceptions is the Shade function in the Mode menu I used for the sky.



DRAWING TIP

Beautiful 16 million colour oil paintings look great on screen, but their use in the majority of games is dubious, (though a couple of static, well drawn images are perfect for your demo disk). You could well be passed up for the guy who drew animation frames of a 32-colour sprite walking around.

You'll need some basic knowledge of *DPaint 3* for this example. Using the Color Palette requestor I created a range of several colours via the Spread function, say from yellow to dark red. Click on the yellow, click the Range button, then click on the dark red to mark off the gradient. When Shade (F5) is used from the Mode menu this range of colours will be used. To try it out, just splash a blob using one of the colours just created on screen, using normal colour mode (F2) then switch to Shade. Using a large tip press either mouse button, while painting over the colour to cycle up and down from yellow to dark red. I made my own tip, looking like the front-slash symbol on the keyboard and picked it up as a brush. This made an effective pointer for designing clouds.

Waterfalls, platforms and characters were designed on the spare screen in *DPaint* and pasted over the background. To spice up the background, little, repetitive, moving details help add life. After a small looping anim of the background was saved, the mouse anim-brush could be added over the top and saved as a different file in case you wanted to change the layout.

DPaint tries to keep down file sizes, so an area of screen that doesn't change from frame to frame isn't re-saved each time. Only those details, like a moving character, add significantly to file sizes. A large anim with only a tiny fraction of the screen changing, would save into a relatively small file on a hard drive. ☺



Looking back these examples look flawed, but this flat little fellow came about through an experiment in fluid animation, created via pixel pushing during flicking back and forth through the *DPaint* frames. The finished anim (just his eight framed walk, other frames were kept separate) could then be picked up as an anim-brush and pasted upon a suitable background. The onion skin technique available in some graphics packages makes this process easier, where a progressively faint image of the frames surrounding the one you're actively working on are visible.

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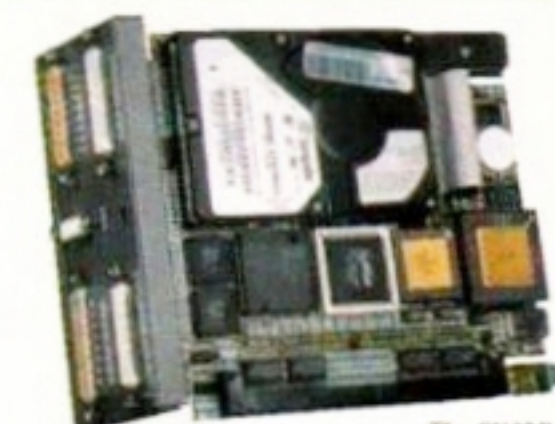
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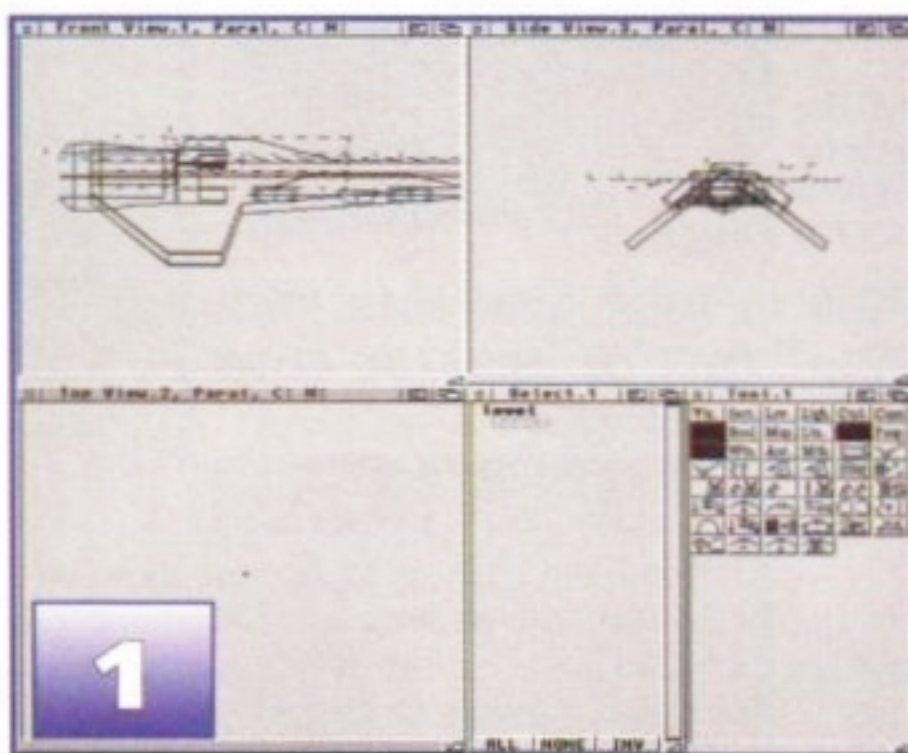
Graeme Sandiford discovers how to make his spacecraft fly using *Real 3D2's* powerful animation tools.

Real 3D Version 2

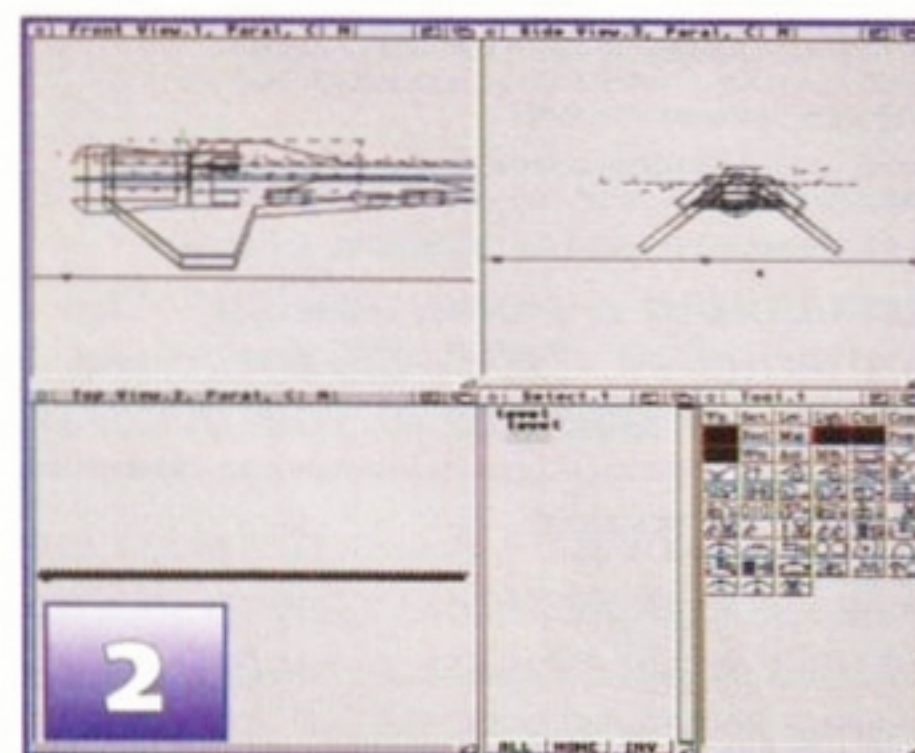
Following on from last month's installment, we'll be using the model of the antigravity craft that we built and texture-mapped. This month we'll create a track for it to race along and take our first look at *Real 3D's* phenomenal animation tools.

As with most good programs there are many ways of achieving the same end result. We'll be flying our ag craft down a track and then getting it to turn around and head back. First we'll use a fairly basic method, velocity, which will speed an object in a certain direction – the longer the line the greater the velocity. As this method only works in one direction we'll use a path-based method that will make the craft follow a curved line. Then we'll use a third method that will make sure that the craft is pointing in the right direction.

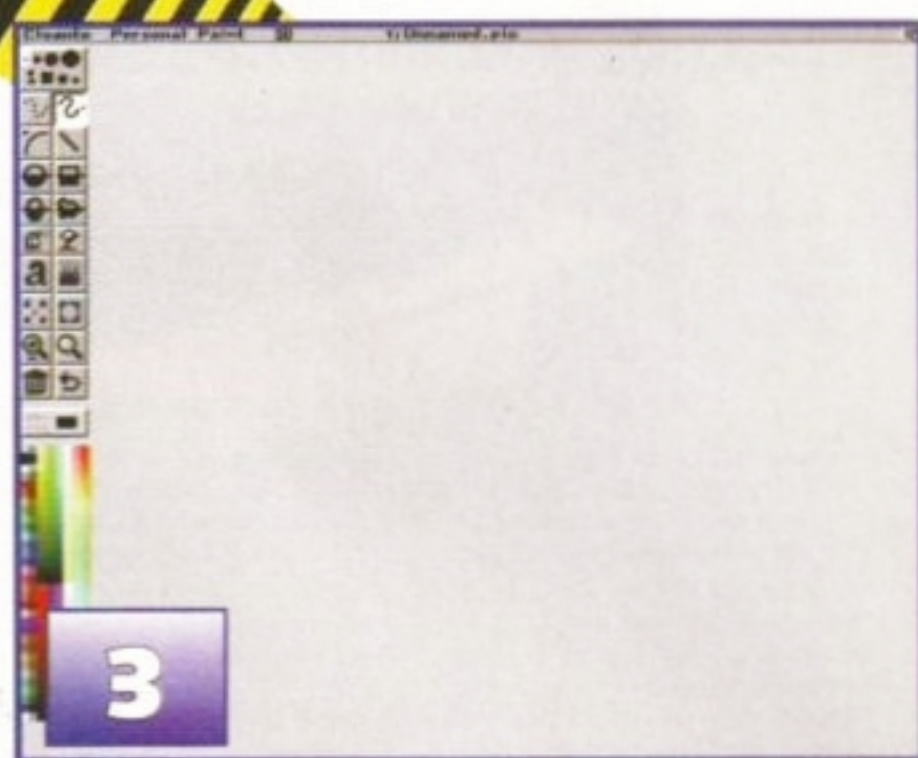
WIPEOUT 2



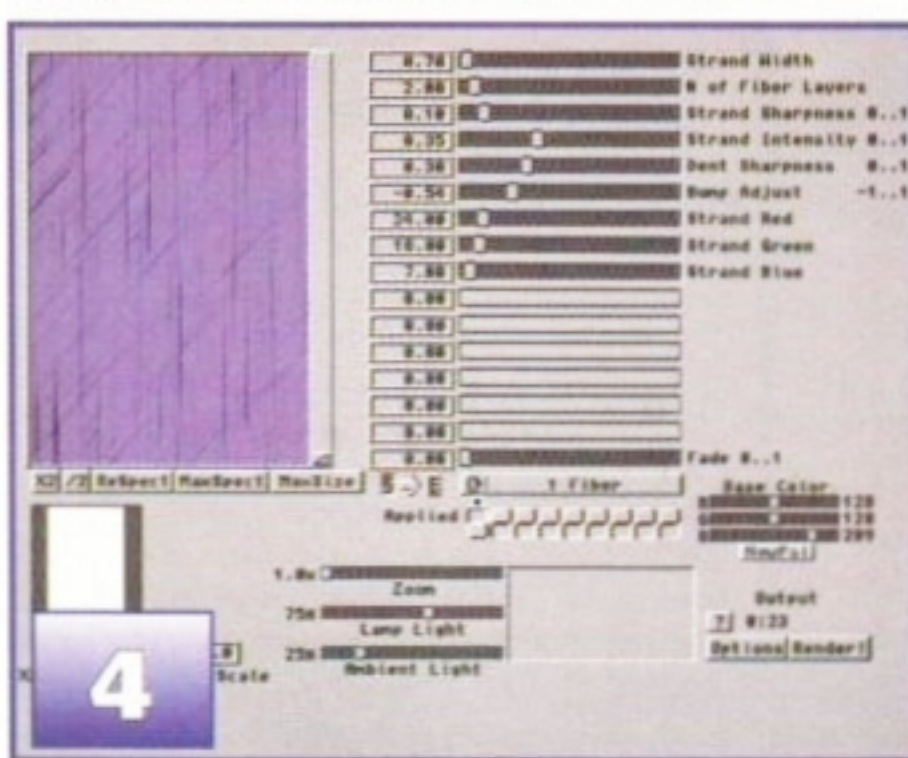
1 Load up the scene from last month's tutorial, go to the top-view and zoom out by pressing <Right-Amiga><O> and drawing a small square – the smaller the square, the greater the magnification. Repeat as needed.



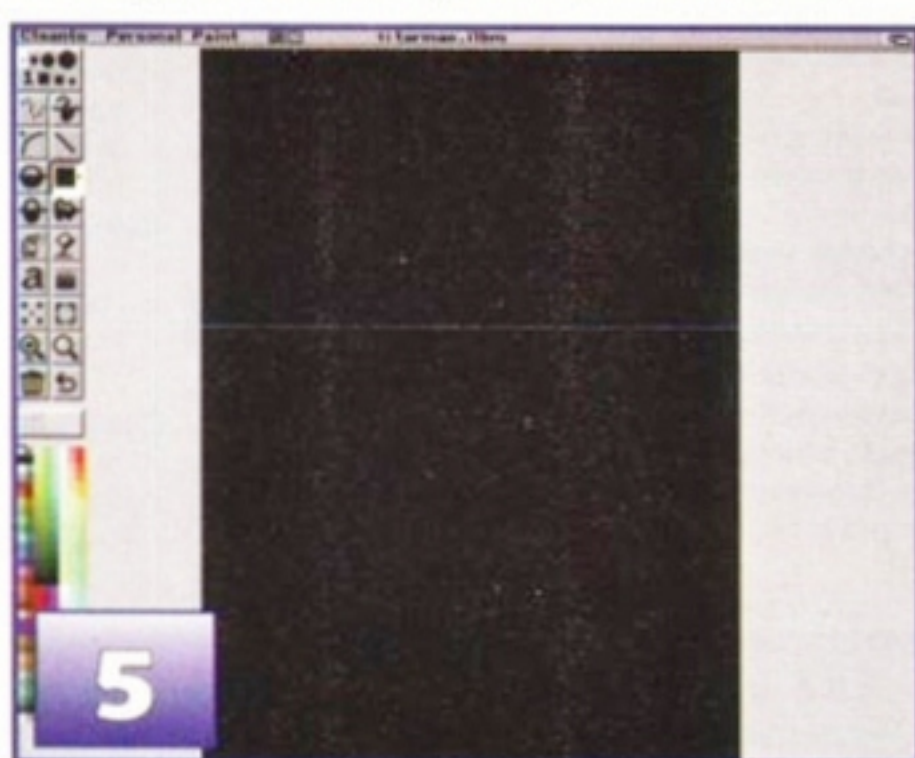
2 If you have a slow machine take note of the size of the ship and delete it. Select the menu Create/Freeform/Mesh, enter a resolution of 64 and 8 and draw a rectangle, like in the image above, with two clicks.



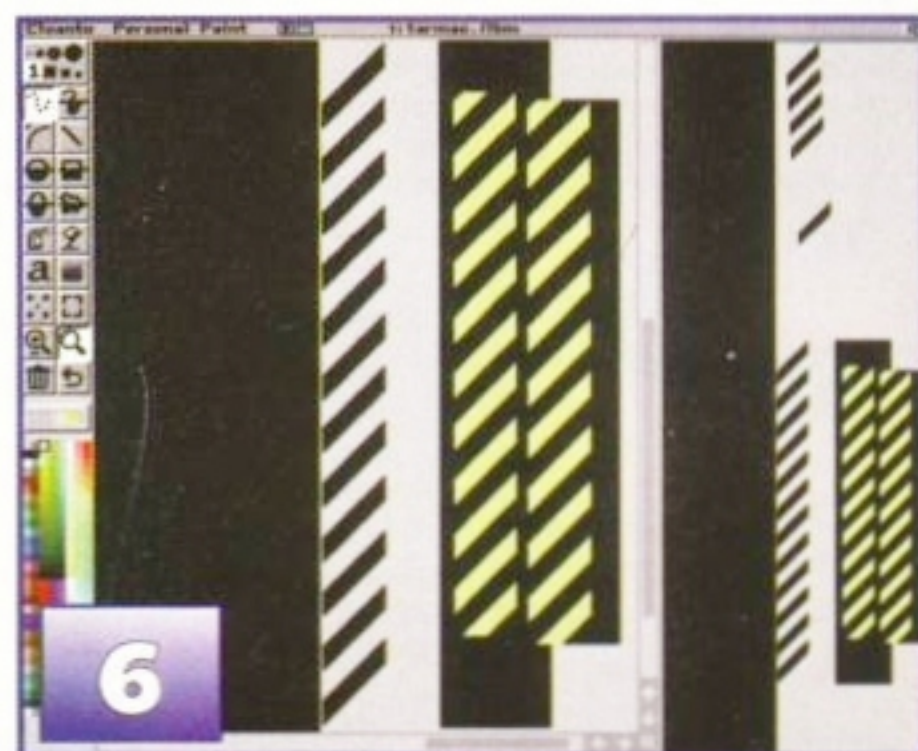
3 Save the project and, especially if you are running low on memory, quit out of *Real 3D*. Load up your favourite paint package or image processor and set about drawing an image to serve as the surface for our track.



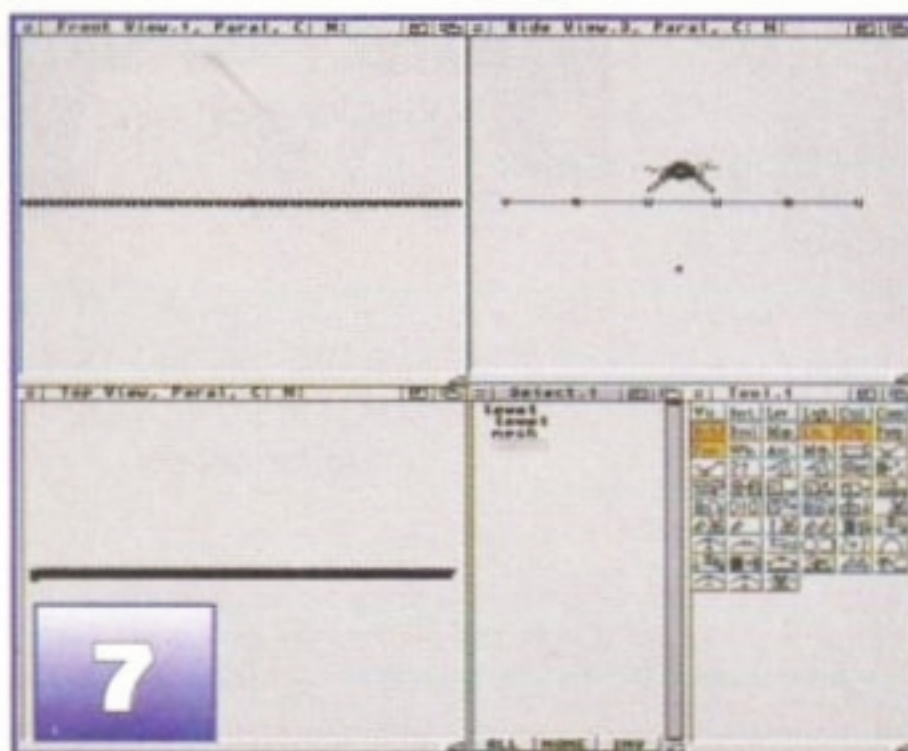
4 As usual you can do what you like without it being "wrong". I did have a nice Essence/Forge-generated Tarmac texture, but lost it, so you could try experimenting with textures like Fibre and Burnish.



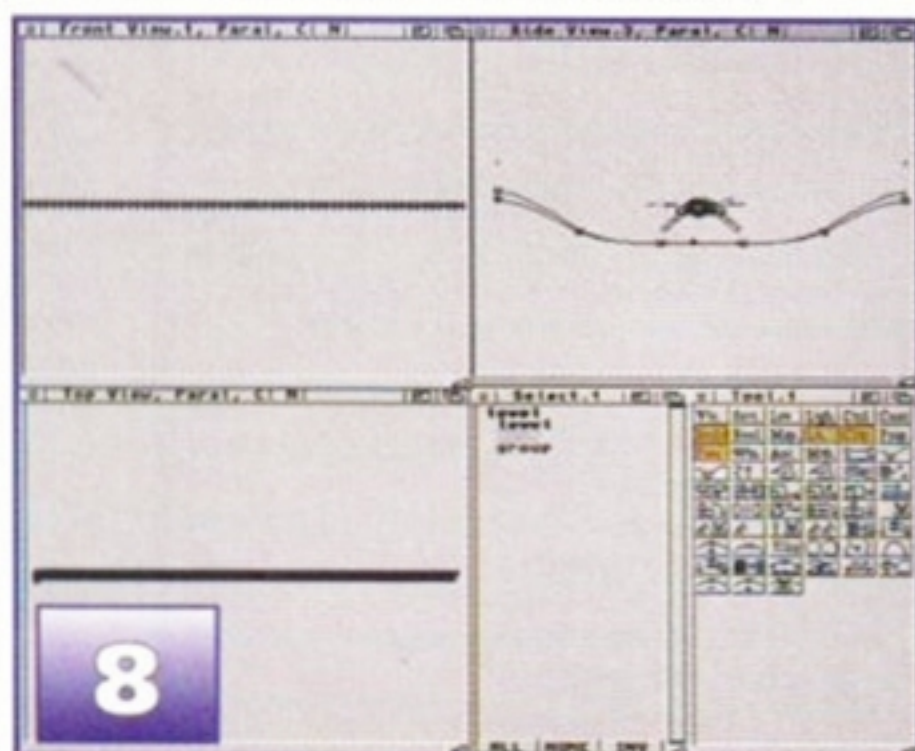
5 If you don't have this package, try to keep the image you paint random. This is best achieved with an airbrush – start with a large nozzle and dark colour and make them smaller and lighter with each pass.



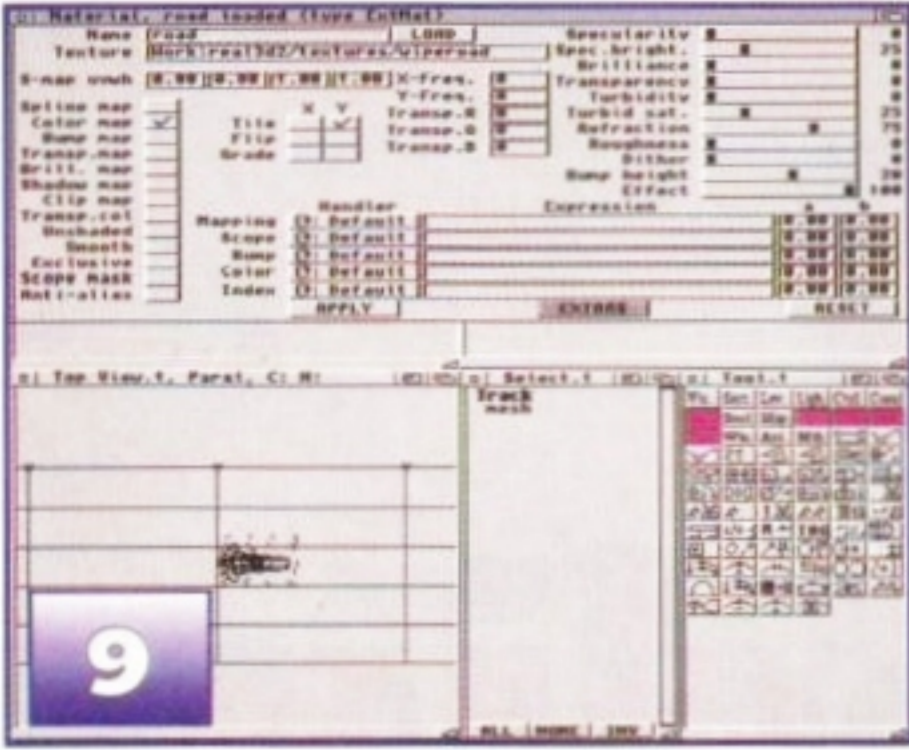
6 This is used for the main part of the track, but we will also create an embankment which will need a different image. I've gone for cliched black and yellow stripes. Create and save a brush that intersects the pattern so it tiles seamlessly.



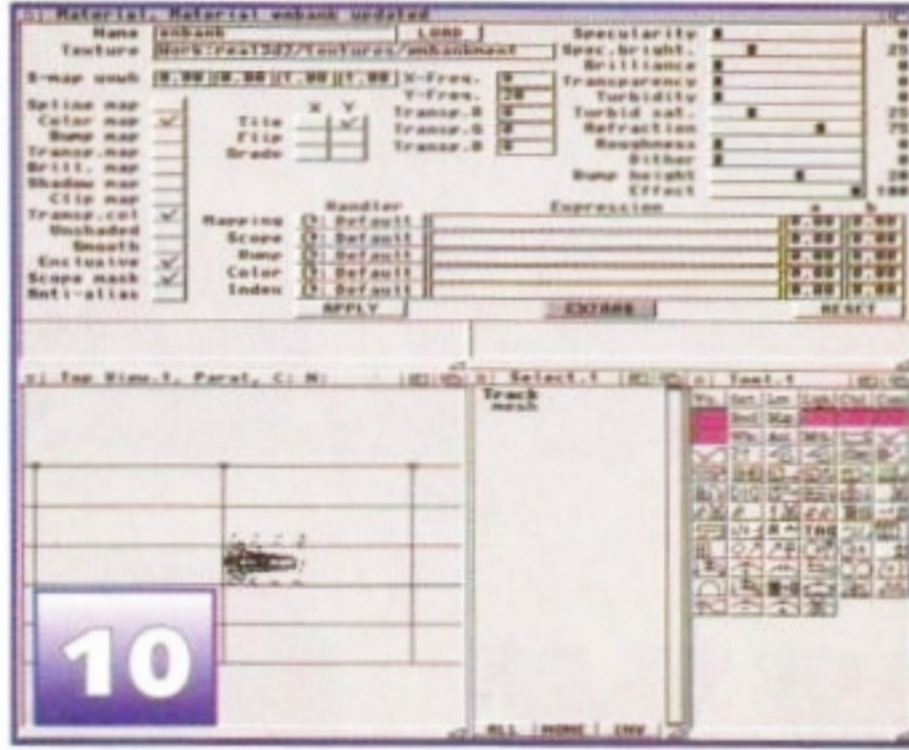
7 Re-load *Real 3D* and your project. Go to the side-view and zoom out so that you can see the full width of the track. Select the points on the left and right edges, by shift-dragging and selecting the menu Create/Structure/Group.



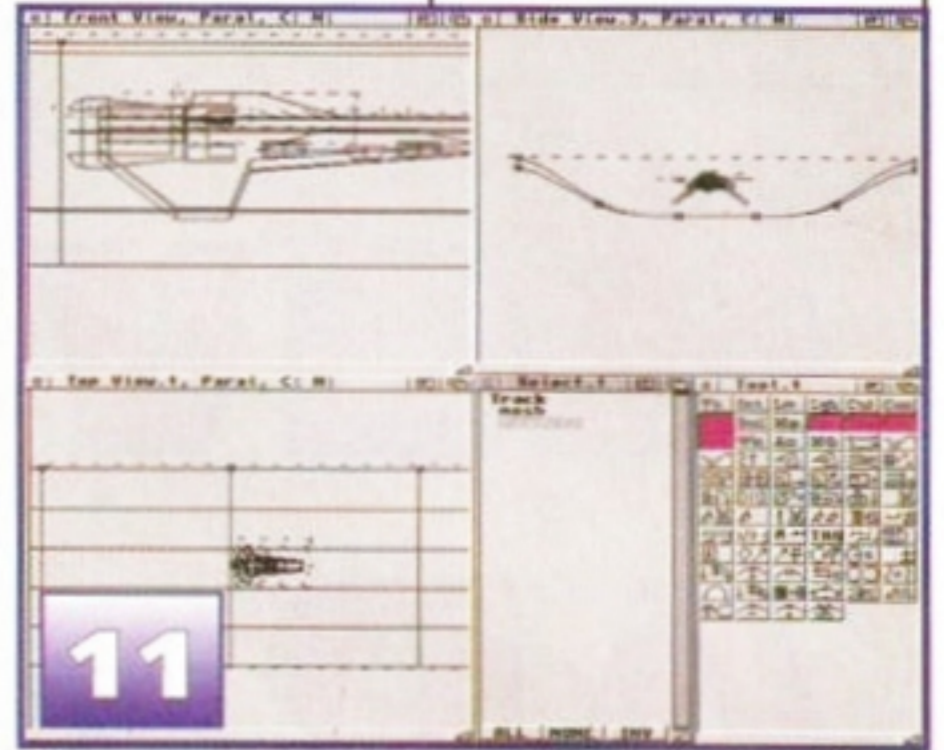
8 Select the new group and move it upwards. This will create a concave shape that is slightly rounded at the bottom. If necessary resize the track so that the bottom of the trough is about twice the width of the ship.



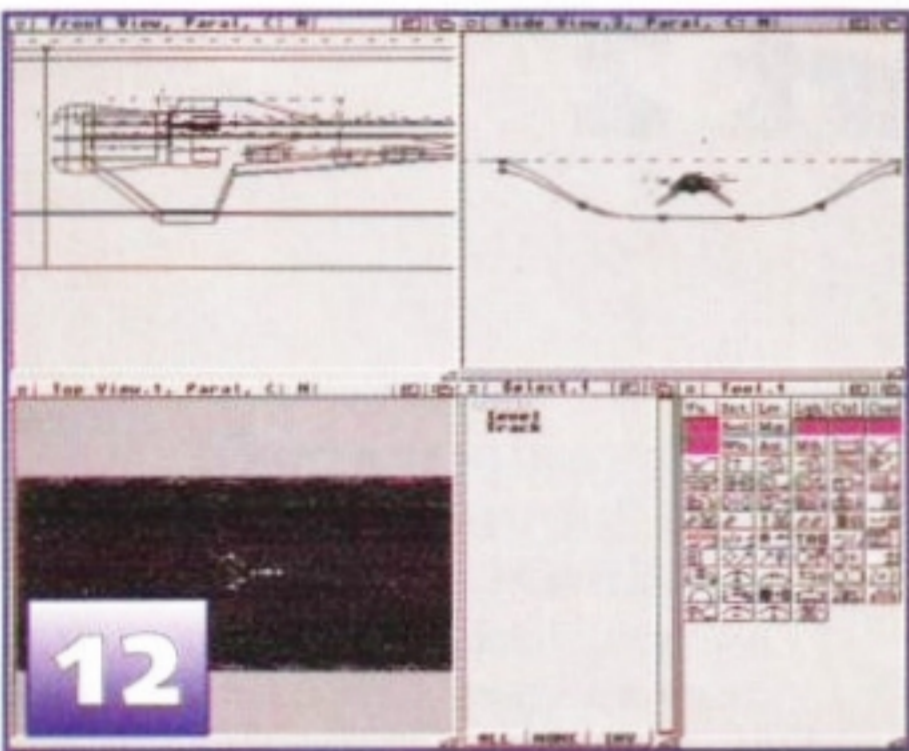
9 Create a new level called track - cut and paste the mesh under this level. Bring up the Material Editor, create a material called Road and load in the first texture you created and apply it as a colour map with Y tiling on.



10 Create another material for the embankment and load it in. Turn tiling on the Y axis on and click on the material types in the grab. Set the Y-freq to about 20 - to stretch the texture decrease this or to increase it, squash it.



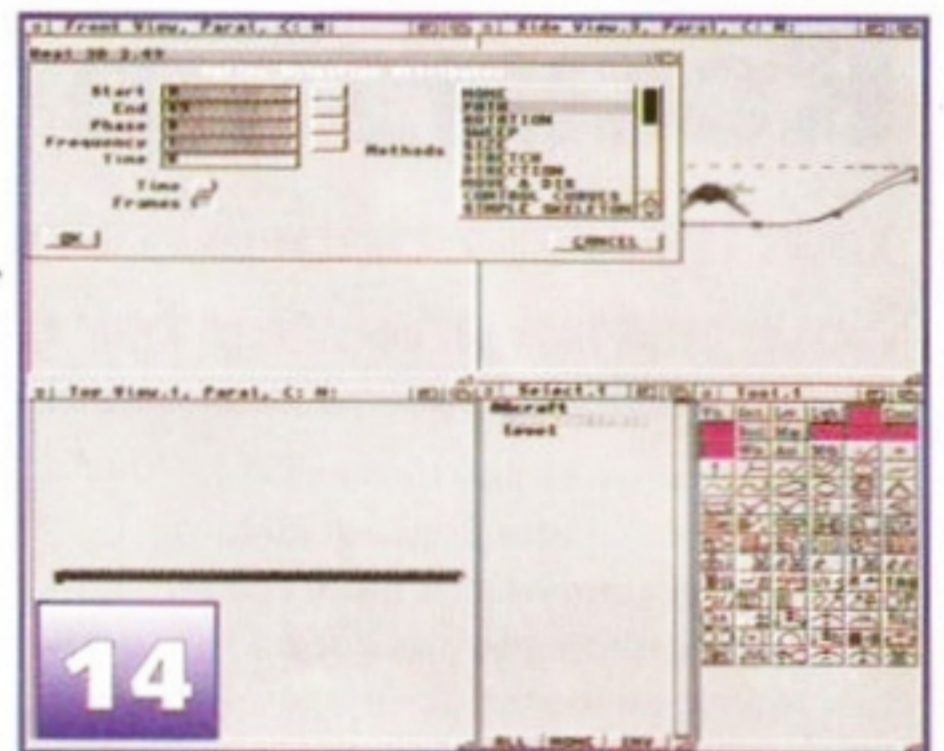
11 Zoom out so that you can see the whole track, select the menu Create/Mapping/Parallel, select the Road material and draw a rectangle that covers the track. Zoom in and make sure that the mapping fits properly.



12 Zoom back out again and create a mapping with the embankment material. When drawing it make it narrow so that it only covers the edge of the track. Zoom in, adjust as needed, duplicate and mirror it.



13 Create a new level and cut and paste the level with the craft under it. Go to the menu Modify/Properties/Velocity, draw a line down the track, select Create/Structure/Method PROCESSOR and then Animate/Control/Play forward.



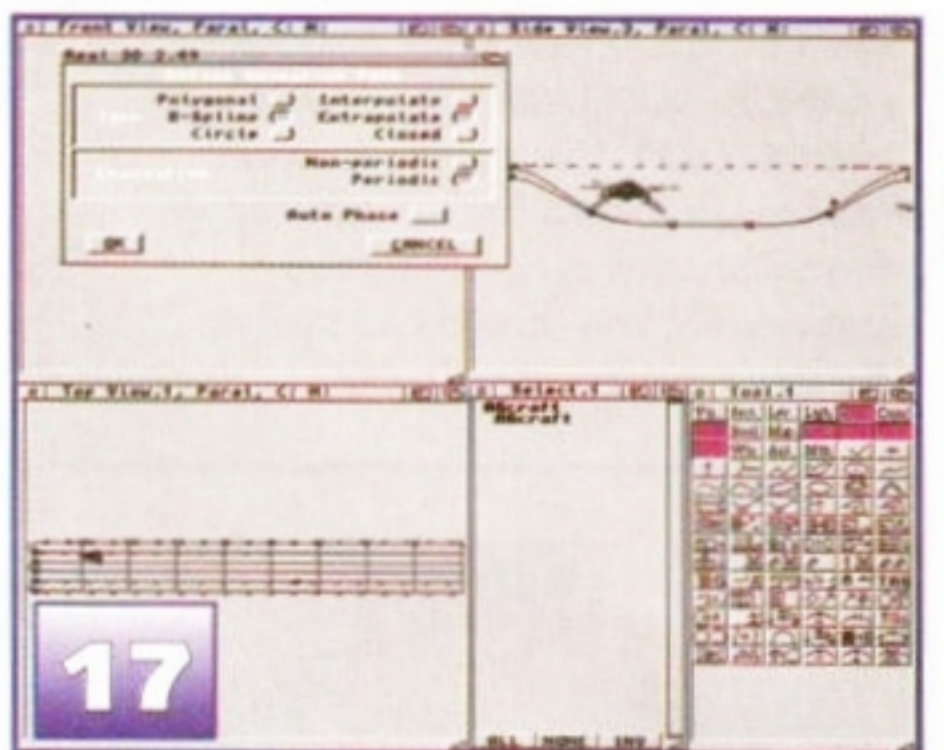
14 The craft will move in the direction of the line you've drawn. Press <right-ami><u> until things are as they were before step 13. Go to the menu Create/Structure/Method and select PATH from the animation methods.



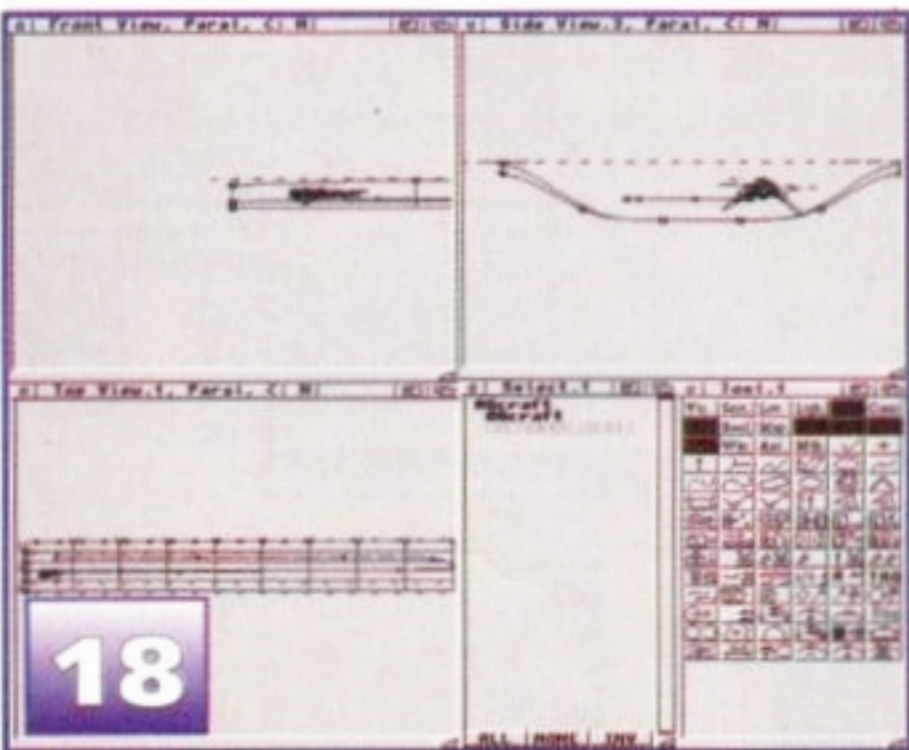
15 Enter the new level and select the menu Create/Controls/b-spline knot. Define a curve, starting from the craft by setting knot points, that goes part way down the track and then doubles back up to the start.



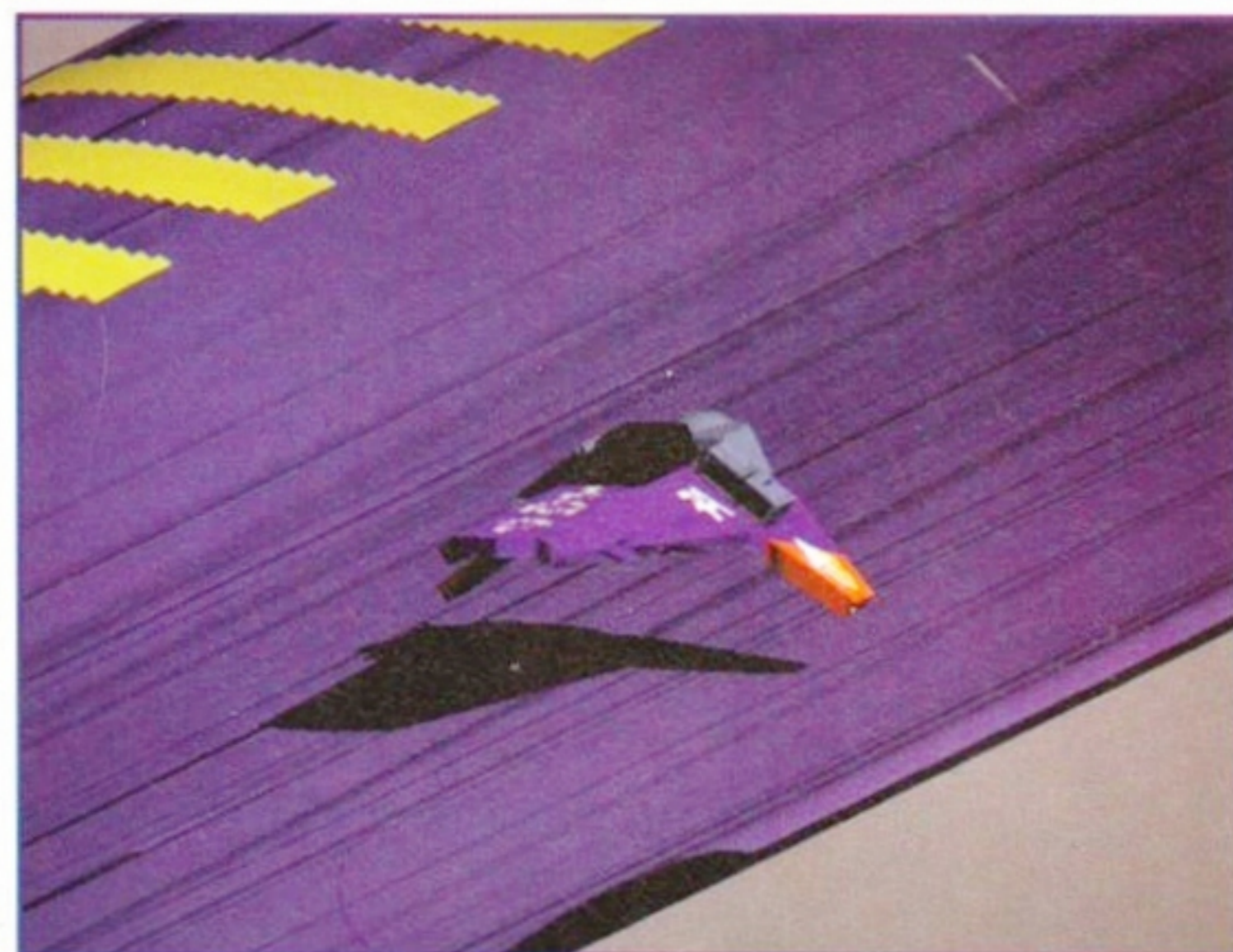
16 Go to the menu Animate/Control/Play Forward and the ship will begin to move down the track following the path you created earlier. However you'll notice it doesn't face the right way for the return leg.



17 To overcome this we'll use a different animation method. Go to the menu Animate/Create/Direction and click on the buttons B-spline, Extrapolate and Periodic on the requester that pops up.



18 Make sure the ag craft level is selected and then click in the top view and draw a curve like before. However now, because it follows the direction of the curve, when you animate it the ship will fly down the track and turn around.



There you go - an animated flying spacecraft.

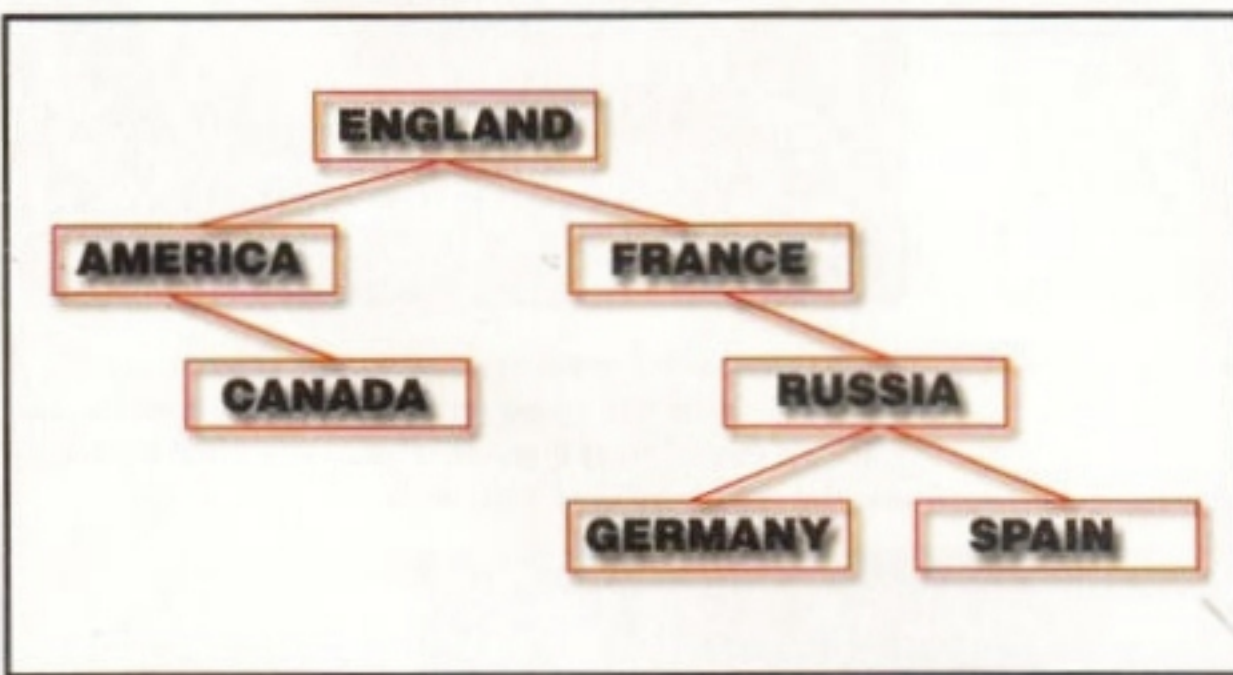
Advanced ARexx Coding

Recursive Tree Sorts Part 2

Last month's tutorial revealed how sort trees work, but how useful are they for programmers?

Recursive binary tree sorts, factorial functions – it all looks very complicated but it really isn't as difficult to grasp as it sounds. Last month we looked at ways of sorting information using these tree sorts and discovered that their structure was very similar to that of a family tree.

Now before we continue, try and draw a sort tree for the following list of seven words... ENGLAND, AMERICA, FRANCE, RUSSIA, SPAIN, GERMANY and CANADA. Use exactly the same rules as last month but this time apply them alphabetically, rather than numerically. You should end up with the following tree...



There are a few points worth making about the 'mechanics' of this tree construction process: Firstly, it was purely an arbitrary decision to make the "less than or equal to" decision correspond to the "left descendants" in the tree. We could equally well have used the reverse convention. Secondly the decision part of our rule could have been spilt into "less than" and "equal to or greater than". Again the choice was arbitrary. What was important however was that we were classifying incoming items into just one of two types – so

there was never any doubt about the exact position that an incoming item would occupy on an existing tree!

Having worked through the creation of some binary trees chances are that you appreciate the type of questions that one asks as a tree is built. You're probably also wondering what possible use such a structure can be! Well, if you think about how the trees were created you'll realise that no matter where you are in the tree, once you've reached a node with a particular value then, by following the left descendant branch, all items found will be less than (or equal to) the value of the node you started from. So by starting at the root, and continually moving to the left (until we run out of left descendants), we can find the node with the lowest value. Suppose we do this – where would we find the node containing the next highest value? The secret here is to realise that any subtree formed using the right descendant of a particular node will only contain values greater than the value of that node. So, if that lowest node has a right descendant, then all we'd need to do is move to that 'sub-tree' – and find the lowest node present in that sub-tree (again using the 'only go left' approach). If there isn't a right descendant then we have to move up to the parent of the node we were looking at because that'll be the node with the next highest value.

This type of tree searching 'jiggery-pokery' incidentally is a lot easier to understand if you have a few diagrams to refer to and the reason I've used a rather 'pictorial' approach in the tree building explanations is to let you see first hand the types of decisions that a tree-based sort routine has to make.

AN EXAMPLE AREXX RECURSIVE SORT PROGRAM

With some basic ground-rules for tree creation and searching under our belt it's time to look at some example code. Let's suppose we've got a block of text, held in a variable called text (clever eh?), that we want to convert to an alphabetically ordered list of words. Separating the words is easy – we can just use ARexx's Words() and Word() functions to collect the individual words in a compound variable like this...

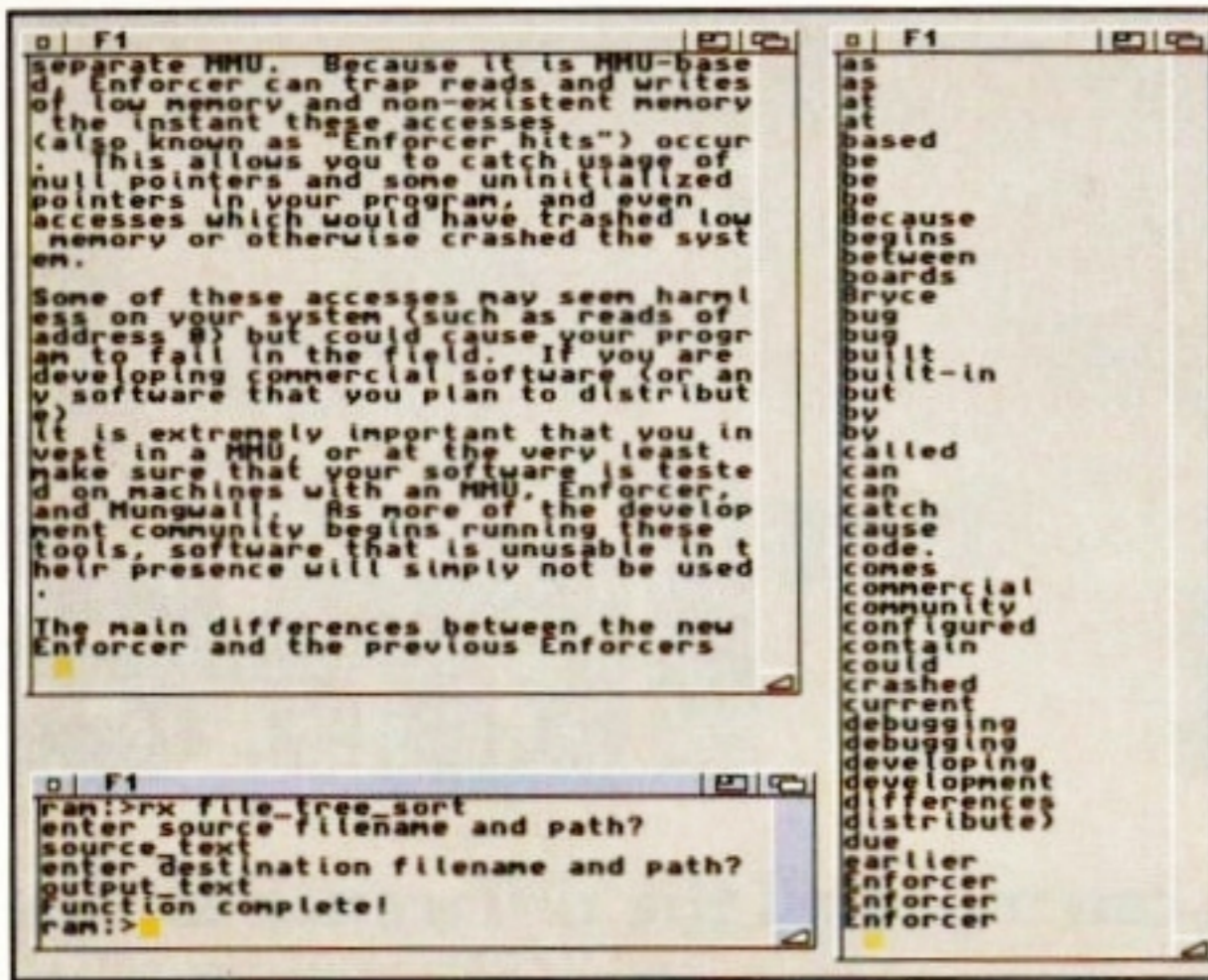
```

count=Words(text)
do i=1 to count
  word.i=Word(text,i)
end
  
```

After this loop is complete we've got our isolated set of words each of which can be identified by specifying a given index value i. The next step is to build a tree structure and of course we need some way of representing the 'tree' in memory. I'm going to use a compound variable set that consists of a stem called tree., a node field (that in reality will contain the index number of the word being added) and left/right fields that will hold the node numbers of any



Sort macros used with word-processor programs like Final Copy could add useful new facilities.



A file sorting example script in action.

left/right descendants present. In other words we're representing the tree using this scheme...

tree.node.left
tree.node.right

By initialising the stem to zero using an initial stem.=0 statement all the left/right descendant fields will be zero (and within the finished code a zero left/right value will be taken to mean that there are no left/right descendants). Another important thing to realise at this point is that the words themselves are NOT going to be stored on the tree since this would be a waste of memory (after all - it's perfectly easy to specify and access the i'th word of the text being examined by using the expression word.i).

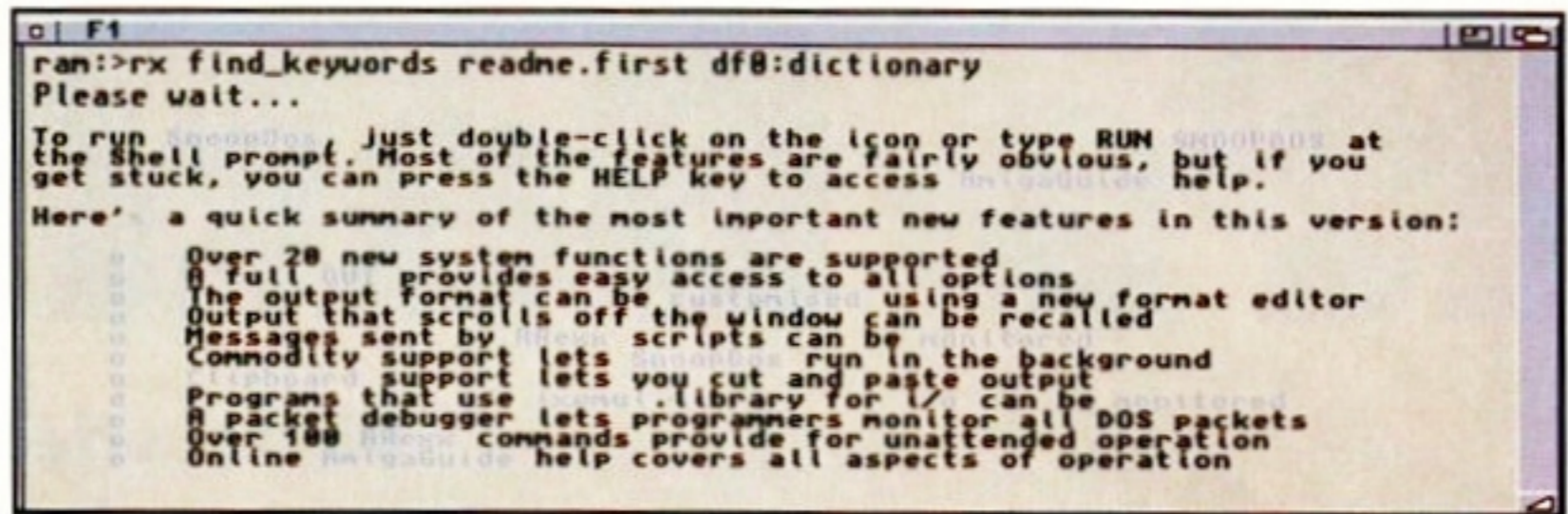
You can see how this indexing arrangement is used by looking at the BuildTree() tree building routine of the example sort program given in Listing 1. The first step is to compare word.i, the new word being added to the tree, with the node word (initially the root). If the new word is less than or equal to the node word, two things can happen: Either there is no left descendant of that node, so the new word gets specified as that left descendant using...

if tree.node.left=0 then tree.node.left=i
or there is a descendant present (as indicated by a non-zero tree.node.left value). In this latter case we make a recursive call to the same routine - only this time we're calling the BuildTree() function like this...

BuildTree(i,tree.node.left)

In other words we now starting the building process one node down - at the left descendant of the original node! Sneaky, and it does take a little thinking about, but basically this code is doing exactly the same thing that we were whilst drawing trees by hand.

Even the humble text editor ED, could be endowed with indexing facilities courtesy of an ARexx sort macro!



Sophisticated string handling, coupled with high speed sort routines, make two powerful allies for serious ARexx users!

Pretty much the same thing happens in the other half of the routine (when the 'less than or equal test' fails) only in this case we're then looking for the presence (or absence) of right descendants.

Once the tree has been built extracting the items in order is easy. Imagine that you start at the root of the tree. To print the whole tree in order you'd need to print the left subtree, then print the root, and then print the right subtree. How would you print the left subtree (which after all could contain any number of items)? Well you'd start at that first left descendant, print the subtree on the left of that node, then print the node itself (which constitutes the root of that subtree), and then print the subtree on the right of the node. This definition goes on and on... in other words it is recursive and if you look at the PrintTree() routine in the example listing you'll see that it mirrors this recursive definition exactly - basically within a loop consisting of just THREE lines of code.

AND FINALLY...

For simplicity the RX runnable tree_sort.rexx script shown in Listing 1 is just sorting a statically defined list of words. On last month's Coverdisk and this month's CD you'll find both this and an alternative version, called file_tree_sort.rexx that reads words from a selected text file and writes the sorted output to a separate file. The sort routines used are, of course, identical in both programs and although ARexx is an interpreted language (and therefore slow compared to languages like C) the speed of these routines should be quite impressive. You should also find a file sorting version of the bubble sort method and on an A4000/040 a piece of text containing 327 words took 143 seconds to sort. The tree sort did it in under 20 seconds - these differences in timings increase dramatically as the number of items being sorted gets larger.

Of course with the tree sort things are helped by the fact that the sorting is achieved without physically rearranging any of the data but the real key, the

thing that makes this magic work, is the recursive techniques used to create and search in ascending order a binary tree that holds indexes to the original list of words. So, needless to say, the next time someone asks you what possible use recursion is to the ARexx programmer, you know what to say. Better still - come up with ways of using these routines in your own scripts and macros. Who knows? You just might start some SORT of trend!

LISTING 1: A COMPLETE RECURSIVE TREE SORT PROGRAM

```

/* ----- */
/* tree_sort.rexx - recursive binary sort
tree example */
ROOT=1; tree.=0; word.=; text='just a
small piece of example text'
count=Words(text); tree.ROOT
do i=1 to count
    word.i=Word(text,i)
end
do i=2 to count
    call BuildTree(i,ROOT)
end
call PrintTree(ROOT)
exit
/* ----- */
BuildTree: Procedure expose tree. word.
parse arg i, node
if Upper(word.i) <= Upper(word.node) then
do
    if tree.node.left=0 then tree.node.left=i
    else call BuildTree(i,tree.node.left)
end
else do
    if tree.node.right=0 then tree.node.right=i
    else call BuildTree(i,tree.node.right)
end
return
/* ----- */
PrintTree: Procedure expose tree. word.
parse arg node
if node =0 then
do
    call PrintTree(tree.node.left)
    say word.node
    call PrintTree(tree.node.right)
end
return
/* ----- */
    
```



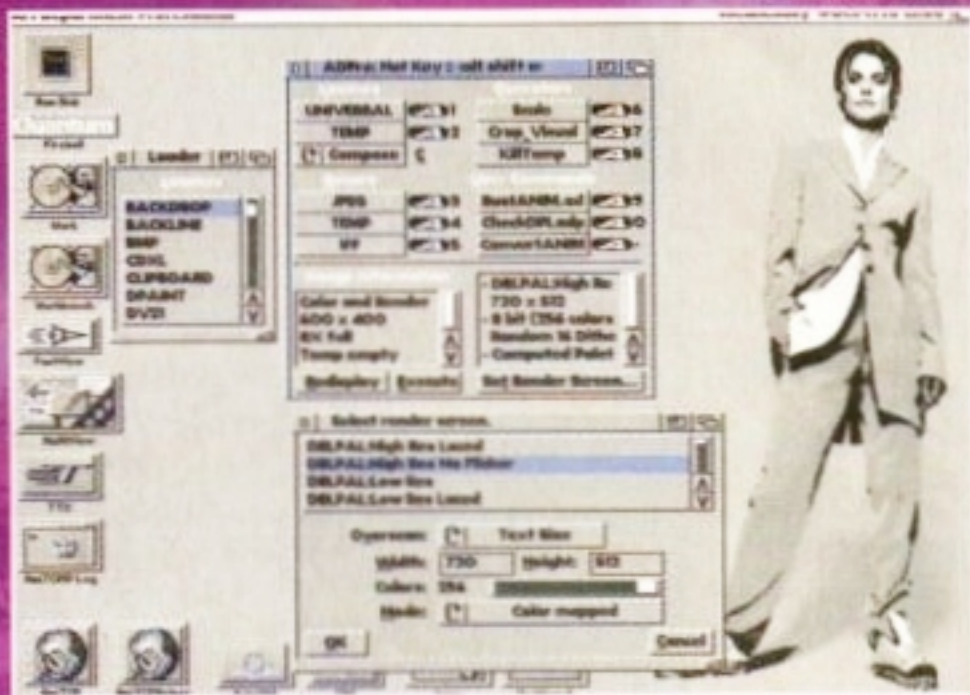
It's Bath Time

Digital effects can make all the difference to the appearance of your presentation. Ben Vost finds out just how these effective FX can be achieved.

SOFTWARE

ADPRO 2.5/MORPH PLUS

I have included these two titles in the list because they can be very effective, if somewhat difficult-to-use, DVE generators. The add-on effects that Morph Plus gives to ADPro, in particular, are of very good quality. Effects such as ripples, and spherising your images, can look very nice when used correctly. Beware though, creating them really does require some knowledge of ARexx and/or a batch processing program like *Batch Factory*. No price or contact number is given because ASDG no longer produce software for the Amiga but you may be able to pick up a copy second-hand.



ADPro 2.5 is still incredibly useful when you need to batch process images - as long as you know ARexx or have ProControl or Batch Factory.

ANIMAGE

169DM (about £67.60)

ProDAD 0049 746 291 134

This isn't really a DVE program, but it does allow the user to layer, fade and wipe animations over a static or moving background and as such, deserves a place in this line up. Again, it is only available through ProDAD directly since they have no English distributor.

CONTENTS

- Chapter 1: Intro. First steps and sorting out the graphics
- Chapter 2: Graphical glory - More on the visual aspects
- Chapter 3: Moving pictures - Animation and video
- Chapter 4: Sounds great - Using sound
- Chapter 5: SFX - Sprucing up with digital video effects
- Chapter 6: Incorporation - Putting it all together
- Chapter 7: Finale - The finishing touches

We're nearing the end of this preliminary phase of our multimedia tutorial. The last element to consider is the final added touches for your transitions. While *Scala* offers lots of nice wipes it isn't able to give the viewer the kind of eyeball delights that a dedicated DVE package like *Adorage* or *X-DVE* is capable of.

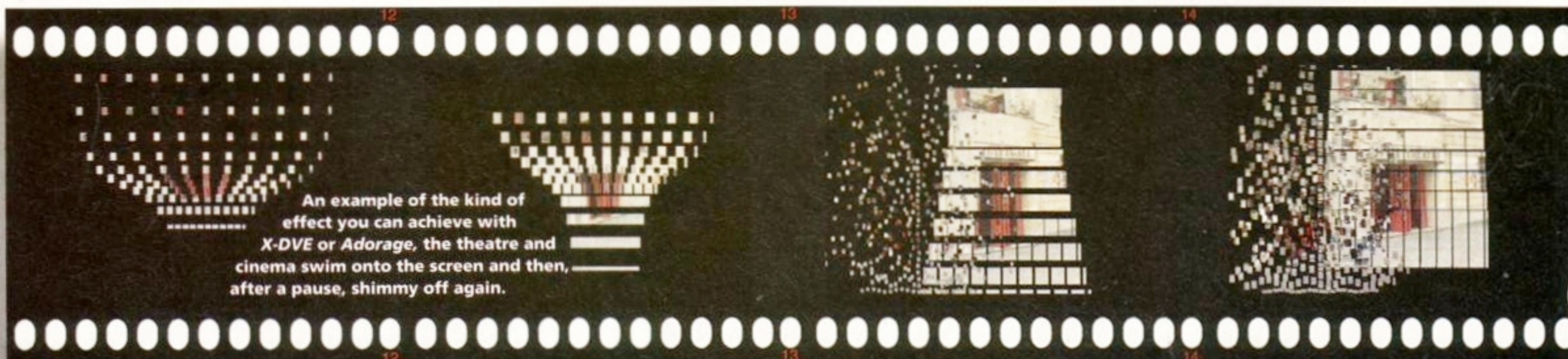
The only problem with the two aforementioned titles is that they usually use their own proprietary animation format, in order to get the best possible playback speed for the necessarily complex motions involved in digital video effects. It is possible to save out sequences from these packages as frames, or even as ANIM format files, but obviously this won't give you the silky smooth animation you require.

Unfortunately, unless you are going to be able to use an external replayer in

your package (this isn't a problem in *CanDo*, although control isn't quite so easy), this is your only solution.

KEEP IT SHORT

As a general guide, you should be careful about making your DVE's overlong or too complicated since the user is going to have to wait for them to load and some of the DVEs generated can take up to as much as 10Mb of disk space. At that rate it would be worse than having to wait for the web! Instead, try to make sure that they last no more than about a second and check playback speed on a test sample before you commit to using a particular level of resolution. By resolution here I mean that you can usually choose how many subdivisions your picture is cut into. The more you have, the slower (and larger) your animation will be in



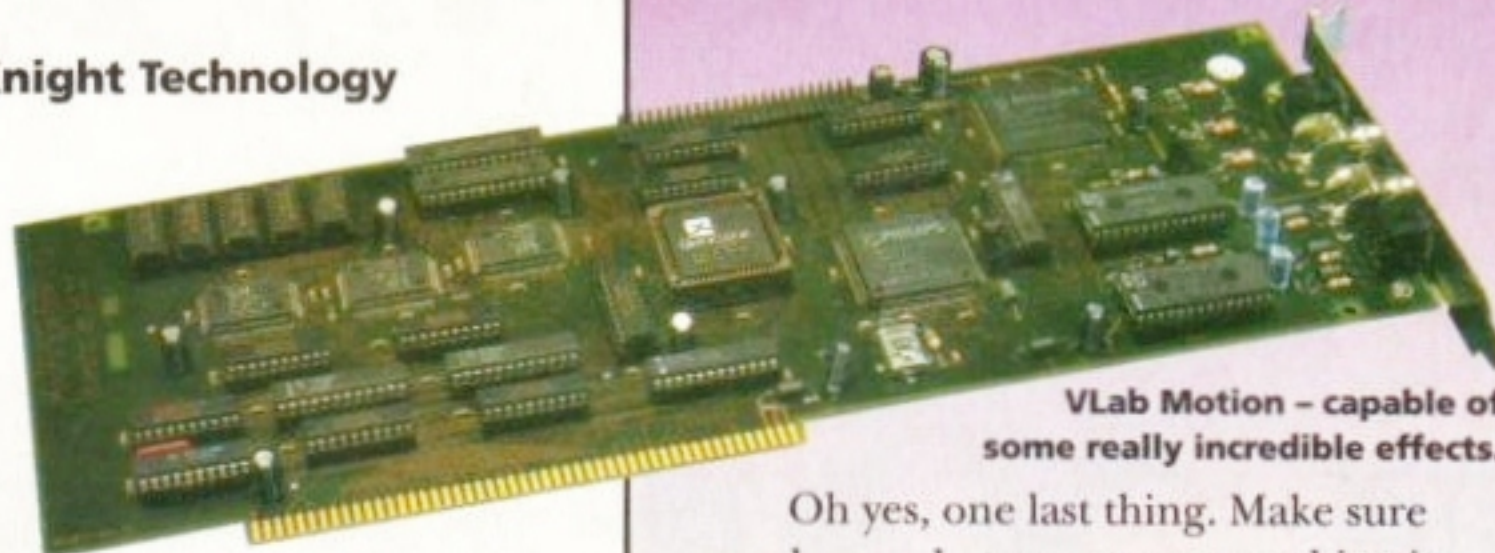
An example of the kind of effect you can achieve with X-DVE or Adorage, the theatre and cinema swim onto the screen and then, after a pause, shimmy off again.

HANDY HARDWARE

VLAB MOTION
£999 FROM White Knight Technology
01920 822321

If you're aiming at really high-end multimedia production, then this board will certainly help you in your endeavours. Able to capture full-frame video at 25fps, the VLab Motion is ideally suited for converting your 3D animations into video, or your video footage into animation. I know we covered video capture in a previous chapter of this tutorial, but the reason VLab Motion deserves another mention is its splendid timeline method of adding effects to footage, some of which are incredible to look at.

This tool comes with no savers for animation formats like CDXL, but does have a full ARexx port so converting frames into the correct format should pose no obstacle. The only problem with VLab Motion is that MacroSystem, its creators, are no longer making it, preferring instead to concentrate on their Draco and Casablanca systems...



VLab Motion - capable of some really incredible effects.

Oh yes, one last thing. Make sure you know what your target machine is going to be capable of. It's going to do your patience no good whatsoever if you spend the next two days creating a high movement, Ham8 animation that won't run on a standard A500+. If it's relevant and at all possible, try the animation on a low spec machine (you could take the accelerator out of your A1200, for instance). If nothing else, it will help to prevent nasty timing problems from occurring.

Next month sees us going through the actual process required to put all the stuff we've been doing for the past five months together. Although we don't have the wherewithal to devote a tutorial to each of the packages you can use we will have a table comparing the main offerings against each other, just so you can be sure that you will be using the right package for your needs.

ANIM5 format because there will be more happening on screen at any given moment.

KEEP IT SIMPLE

Remember also that a DVE doesn't have to be flashy twirling pixels floating flag-like in space before twisting in on themselves to reveal your picture. It can be something as simple and effective as a fade or wipe. You'll say that *Scala* can do a very nice, very smooth fade and yes it can, but what if, because of other aspects of your production, you end up needing to use *CanDo* as your primary compilation tool. Even if you are using *Scala*, a cross fade can be even more impressive since *Scala* only allows for a limited number of colours in text to be faded between, whereas an animation frees you from that sort of limitation.

Another point to remember is that you don't have to restrict yourself to the dedicated DVE packages. Why not take a plane in *Lightwave*, map your image onto it and then explode it or use a clip map to eat away at it over time. You could also use *ImageF/X* or *ADPro* to reduce the number of colours in your picture over time to two, and then use a morphing package to turn that two colour image into another that you colour reduced. DVE's don't have to be limited to the ones you are given, you can make them up for yourself.



X-DVE
(X-DVE 1 was on issue 88's coverdisk)
X-DVE 2.5 £39.99 (through AF)
This Italian program really lit our Dave Taylor's fires. He enthused over its splendid features and waxed lyrical at the smoothness of the playback achievable with the program. Unfortunately, that smoothness relies on the XFA animation format which has to be foregone in order to comply with *Scala*'s file format requirements.

X-DVE. Easy effects, but they take a long time to render, even on an '040.

SOFTWARE

ADORAGE 169DM
(about £67.60)
ProDAD 0049 746 291 134

Adorage was the first DVE package to surface for the Amiga and very good it was too. The current version supports even more different effects, but has no English distributor, much like ProDAD's other packages. By default *Adorage* saves its effects in the SSA format shared by ProDAD's other packages but can be forced to save as frames or as an ANIM5 file.

X-DVE
(X-DVE 1 was on issue 88's coverdisk)
X-DVE 2.5 £39.99 (through AF)

This Italian program really lit our Dave Taylor's fires. He enthused over its splendid features and waxed lyrical at the smoothness of the playback achievable with the program. Unfortunately, that smoothness relies on the XFA animation format which has to be foregone in order to comply with *Scala*'s file format requirements.

X-DVE. Easy effects, but they take a long time to render, even on an '040.

CHAPTER FIVE



EQUIPMENT UPDATE

Since we started this tutorial series there have been a few changes in the line up of tools that can be used for your production. One of the main changes comes in the video capture section where two new products based around the same main bit of hardware have entered the market.

Omnilink are busy working on an adaptor to enable Amiga users to use the extremely popular **Connectix QuickCam** to capture Lo-Res video and audio in 16 or 64 greyscales and output it as ANIM and CDXL with sound.

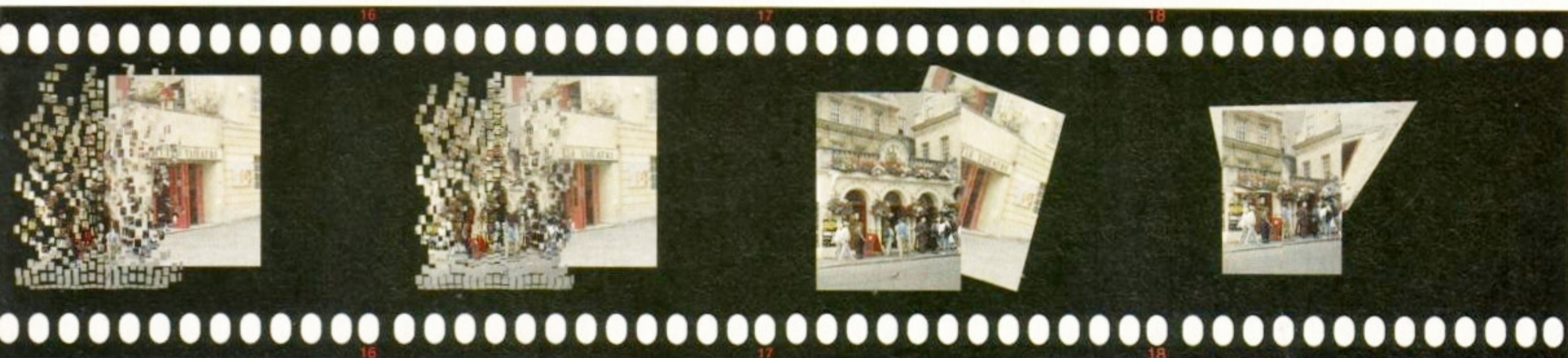
The camera itself is a little ball that sits in a cradle and you need no other cables since it just plugs straight into your parallel port. You don't even need a power cable because the QuickCam only draws 350 milliwatts - a power requirement the Amiga's parallel port can easily fulfil. We hope to have a definitive review of the systems as soon as possible.

AQCvid from Omnilink Corp.
Price (not including QuickCam @ \$94.99) \$59.99
Tel: 001 718 805 2601
Fax: 001 718 805 2601
email: sales@olink.com

Cocktel takes the basic idea of using one of the cheap video conferencing cameras like AQCvid, but builds on the idea by giving the user the opportunity for video-phone-like performance through a modem link.

You will still be able to save out your sessions, but it remains to be seen in what format it will be in. Additionally, Cocktel is designed to work with colour cameras and can be used with proper video cameras as well as the little video conferencing jobbies.

Cocktel from ProDAD.
Price about £300 for camera, digitiser card and software, less if you only require individual parts.
0049 746 291 134



Blitz Tutorial

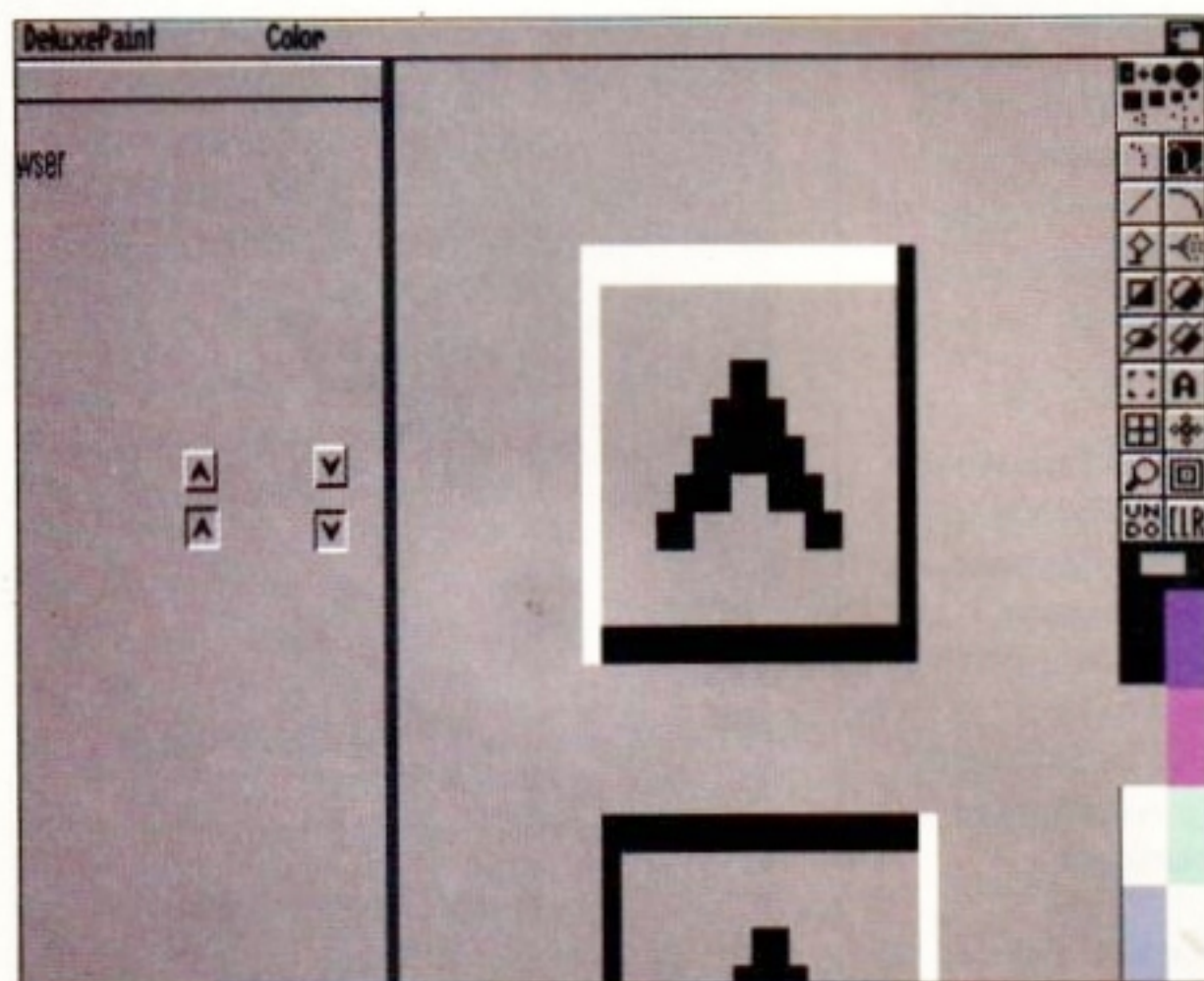
A program isn't completely dressed without buttons says John Kennedy.

We've put some pictures in and tidied up a bit – now it's time for some buttons. The buttons we'll use for our Blitz Browser are based on images, and unsurprisingly that requires some images to work with. So get out your favourite paint package and start drawing. We need a button for scrolling up, a button for scrolling down and a button for switching images on and off.

Blitz lets us use two separate images for each button, and this allows us to create a little 3D effect by using shading around the button edges. The first image is shown as a default, and when the button is clicked, the second image is shown.

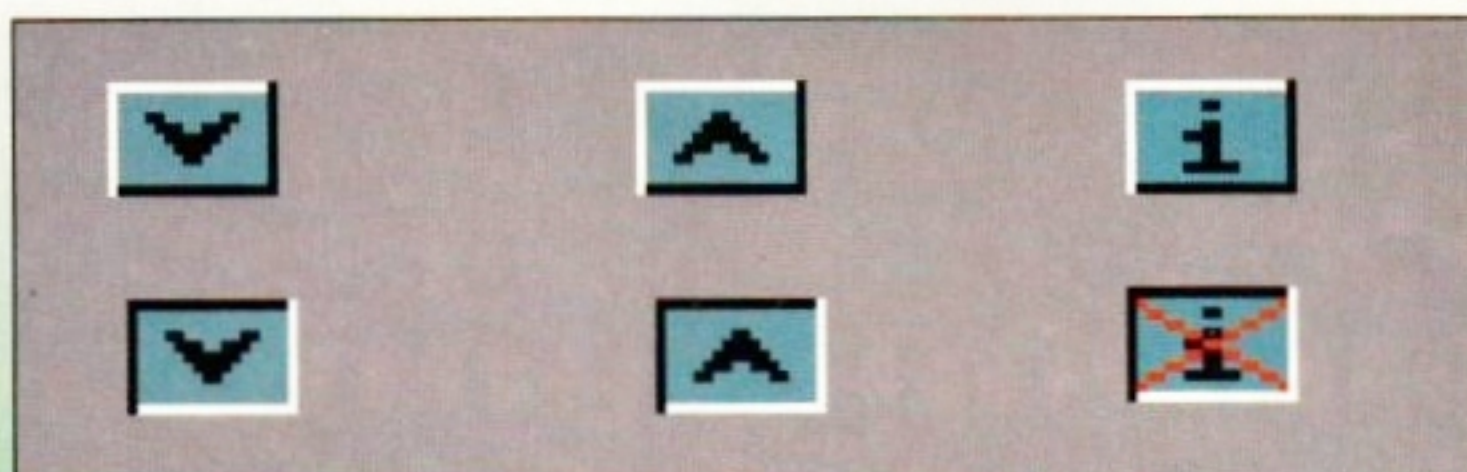
Perhaps the easiest way to start is to pinch some buttons from the Workbench, like these taken from a standard window:

The best place to pinch potential gadget graphics is the Workbench. Use your paint package's ability to grab other open screens.



After a bit of work, you should end up with images better than these. Notice how the pairs are exactly the same, except for the swapping of the white and black shades which make up the outline. You can use different colours if you wish to make them stand out a bit more, but don't go overboard. Remember, the point of the gadget is to make things easier for the user: not to make the screen display look more technical and important.

Use the gadgets you grabbed as a basis for your own designs. Remember to keep them simple otherwise they lose their point.



Blitz requires that the images used with the gadgets are dealt with as Shapes, and this makes it quite straightforward to load them into your program. In fact, all you need to do is carefully cut out each button as a brush in your paint program, and then save them to the same directory as your Blitz program, in normal IFF format. Try to use the same palette for each brush to avoid strange colour changes when you load them into the program.

Here is how you can include the Shapes into your Blitz program:

```
LoadShape 0, "up1.iff"
LoadShape 1, "up2.iff"
LoadShape 2, "down1.iff"
LoadShape 3, "down2.iff"
LoadShape 4, "image1.iff"
LoadShape 5, "image2.iff"
```

As we are now using Shapes 0 to 5, we need to change the reference in the picture drawing routine to use Shape 6 instead of Shape 0. If you don't remember to do this, weird things will happen when you click on the UP button after loading a page with a graphic image. To create gadgets from the shapes, use the following code:

```
ShapeGadget 0,614,221,0,2,0,1 ; Scroll up
ShapeGadget 0,614,232,0,3,2,3 ; Scroll down
ShapeGadget 0,614,210,1,4,4,5 ; Images on/off
```

You can see that the Image gadget is slightly different in that it has an extra 1 where the other gadgets have a 0. This is the flag which stands for "toggle on/off". When you click on the Image gadget it's going to lock to an on position or to an off position, rather than simply click in for an instant like the up and down buttons.

As we specified the same gadget list as the existing proportional gadget, the buttons will automatically be attached to the same window. Make sure you remember to shorten the scroll bar and its border a little to make room for the three new buttons. Each of these gadgets was 11 pixels high.

DETECTION

To detect which gadgets are clicked, we need to add some code to the main loop in our program. So far we have used this loop to watch out for menu usage, and also clicks on the scrolling gadget. Now we need to expand it to react to the other gadgets being pressed.

To start with, we'll need to filter the messages a little more finely. Up until now there was only one gadget, and so we didn't need to work out which one had been pressed. That's changed, and so we need to include a Select GadgetHit command, in the same way in which we detect individual menus with a Select MenuHit command. Here is the changed listing:

Case \$40

Select GadgetHit

```
Case 1 ; Scroll bar clicked
y.w=VPropPot(0,1)*height
PositionSuperBitMap 0,y.w
```

```
Case 2 ; Click on up button
Case 3 ; Click on down button
Case 4 ; Click on Image button
End Select
```

As you can see it's merely another Select/End Select statement and some Cases to check for each gadget. We can use the existing code for the Scroll bar, because it works in the same way it always did.

ACTION!

Now it's time to make the buttons do something. Let's start with the Images button. If this is switched on (which is the default) then any graphics are displayed. If it's switched off then they won't be displayed. First of all, let's create a global variable at the start of the program which remembers the state On or Off. Using Blitz's built in On and Off values helps us avoid having to use numbers which can get confusing.

; Global variable

images=On

Now here's the code you place after the Case statement which detects the Image button being pressed. As you can see, it toggles the value between On and Off.

```
If images=On Then images=Off Else images=On
```




Finally, we should alter the Picture drawing code to take note of the state of the "images" variable. I'm going to tie this in with the code for a broken image, that is, an image which cannot be loaded. You might want to create a new section which draws an outline of the correct size instead. Here's the changed section of the program:

```
If n$="broken" OR images=Off
  y=WCursY
  x=WCursX
  WBox x,y,x+16,y+16,2
  WLine x,y,x+16,y+16,1
  WLine x,y+16,x+16,y,1
  Else ; Load in image as a "shape"

  LoadShape 6,n$

  ; Place shape in main bitmap

  y=WCursY
  x=WCursX

  WBlit 6,x,y

  End If
```

You can see that this section also changes the LoadShape from 0 to 6, as mentioned previously.

MOVE IT

Now it's time to deal with the up and down gadgets. We need to make the window scroll up and down depending on which button is pressed. This shouldn't be very hard – we've already been using the scroll bar to do much the same thing.

Here's how it's done. First of all we get the current value from the scroll bar's proportional gadget. This is always in the range 0 to 1 (don't get confused with the 0 and 1 in the `r=VPropPot(0,1)` command though – here the 0 and 1 refer to the gadget list and gadget number respectively).

We then alter the value returned by a smidgen, and re-adjust the scroll gadget so it's knob moves to the right location. Then we scale up the value and use it to adjust the SuperBitmap, which effectively scrolls the display for us. We must remember to use Redraw to update the appearance of the gadget.

Here's the listing for the Up button. This is placed after the relevant Case statement in the main loop.

```
p=VPropPot(0,1)
If p>0.02 Then p=p-0.02
y.w=p*height
SetVProp 0,1,p,(10/height)
Redraw 0,1
PositionSuperBitmap 0,y.w
```

Here's what the program looks like so far:

CALL ME BUTTONS...

Of course, you should feel free to add more buttons to the program – as long as they make it easier to use. For example, you might want to create some buttons which move immediately to the top and bottom of the document or that can return you to the previously loaded HTML page. Design and save the buttons as before. Here is the source code for loading and making them into gadgets. Again, you'll find that the scroll bar needs to be shrunk to accommodate them.

```
LoadShape 0,"up1.iff"
LoadShape 1,"up2.iff"
LoadShape 2,"down1.iff"
LoadShape 3,"down2.iff"
LoadShape 4,"image1.iff"
LoadShape 5,"image2.iff"
LoadShape 6,"top1.iff"
LoadShape 7,"top2.iff"
LoadShape 8,"bottom1.iff"
LoadShape 9,"bottom2.iff"
LoadShape 10,"back1.iff"
LoadShape 11,"back2.iff"
```

```
ShapeGadget 0,614,199,0,2,0,1 ; Scroll up
ShapeGadget 0,614,210,0,3,2,3 ; Scroll down
ShapeGadget 0,614,177,1,4,4,5 ; Images on/off
ShapeGadget 0,614,188,0,5,6,7 ; Top of page
ShapeGadget 0,614,221,0,6,8,9 ; Bottom of page
ShapeGadget 0,614,232,0,7,10,11 ; Previous page
```

The code for moving to the beginning and end of the document is quite easy. Here it is, including the extra Case statements you need to include in the main loop:

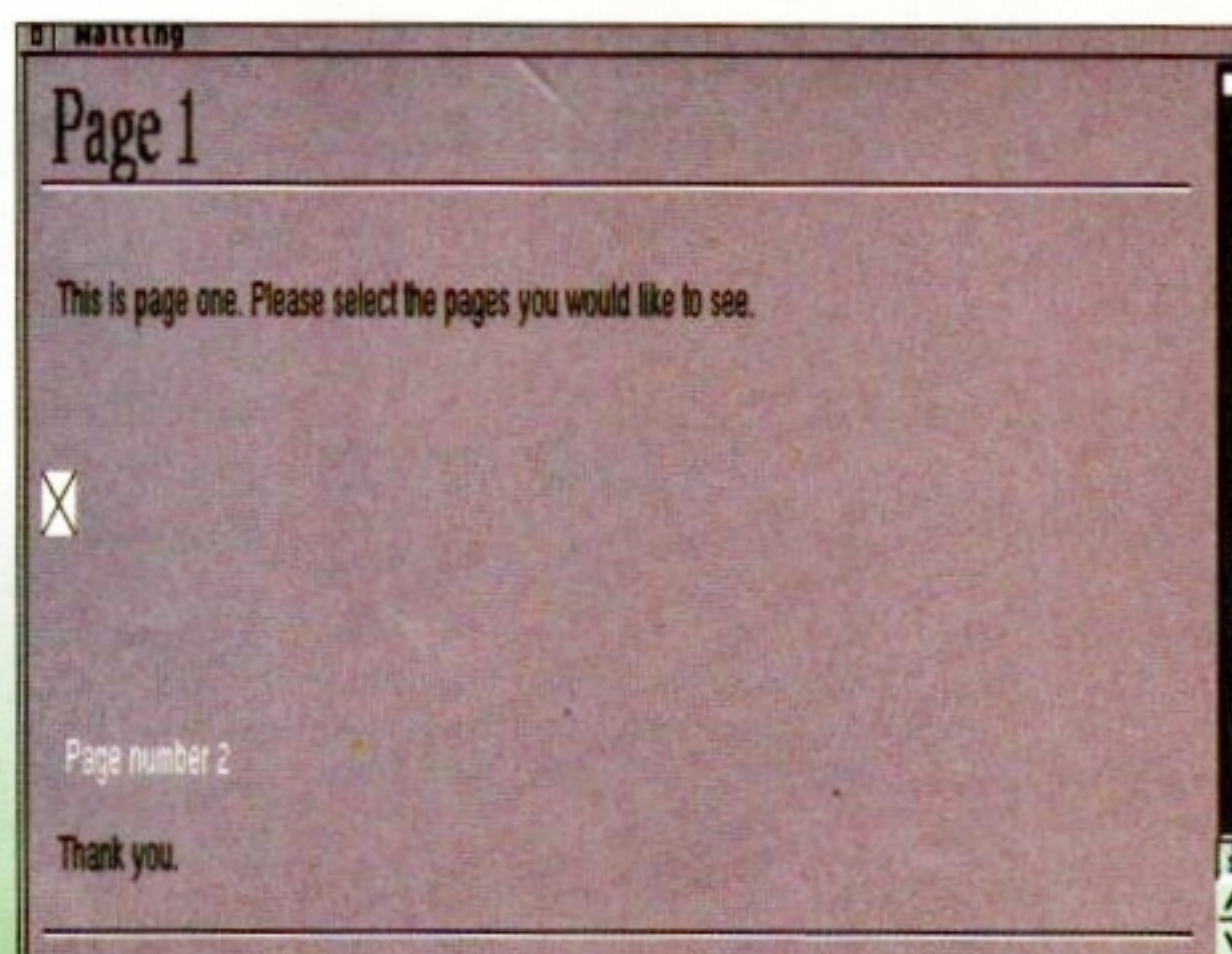
```
Case 5 ; Top of document

SetVProp 0,1,0,(10/height)
Redraw 0,1
PositionSuperBitmap 0,0

Case 6 ; Bottom of document

SetVProp 0,1,1,(10/height)
Redraw 0,1
PositionSuperBitmap 0,height
```

Hey, looking good. Are there enough buttons? Naw, let's add some more...



As for the "move to previous document" button, well that's slightly more tricky. Technically you should create a linked list of pages, and add a new link every time a new page is loaded. I'll leave that for you to do yourself. Here I'm only going to store the previous page, that's all. So if you load page 1, move to page 2, then clicking on the previous page button brings back page 1. Clicking on it again brings back page 2, and so on.

One change I've made is to include a search for a default page called "home.html". If this document exists, it's loaded by the Browser when it first starts. This makes it easy to create an index of often used pages. OK, so here are a few more global variables:

```
; Global variable

images=On
previous$="NULL"
current$="home.html"
```

Now here is the altered lines in the Load() function:

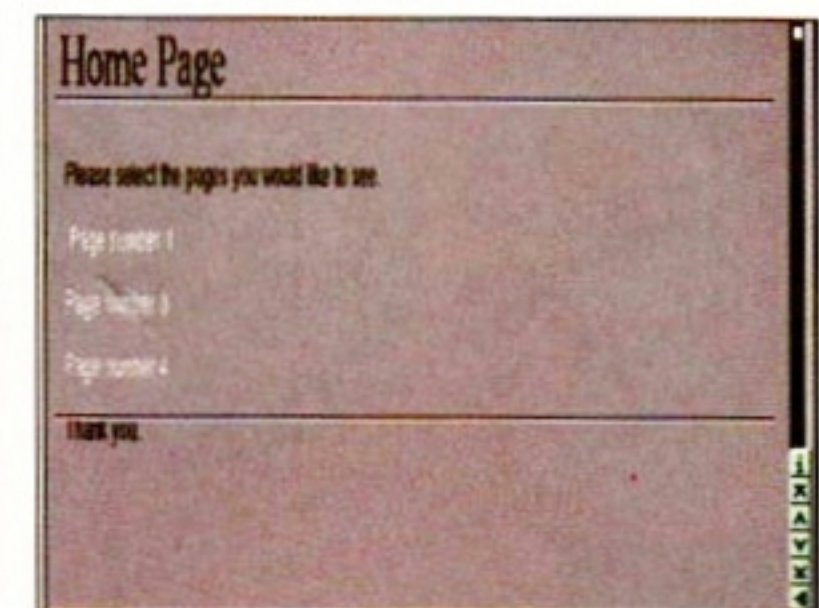
```
SHARED previous$
SHARED current$
previous$=current$
current$=p$
```

Nothing too clever here: the variables are SHARED (if not, the Load() function would make up it's own variables of the same name) and then the previous page address updated.

Finally here is the GadgetHit code which occurs when you click on the Back button.

```
Case 7 ; Previous document
  If load(previous$)=True Then
  Gosub process
```

Here's what the new Browser looks like, complete with half a dozen buttons:



Six buttons are probably enough. Try re-positioning them at the top of the screen.

That's probably enough buttons to be going on with! By next month we should have the brand new *Blitz Support Suite* in, and we might even be able to start taking advantage of its many features. For the complete source code developed this month, check the Coverdisc.



Mail Bag

Send your letters to: Letters To The Editor, *Amiga Format*
30 Monmouth Street • Bath • Avon • BA1 2BW.

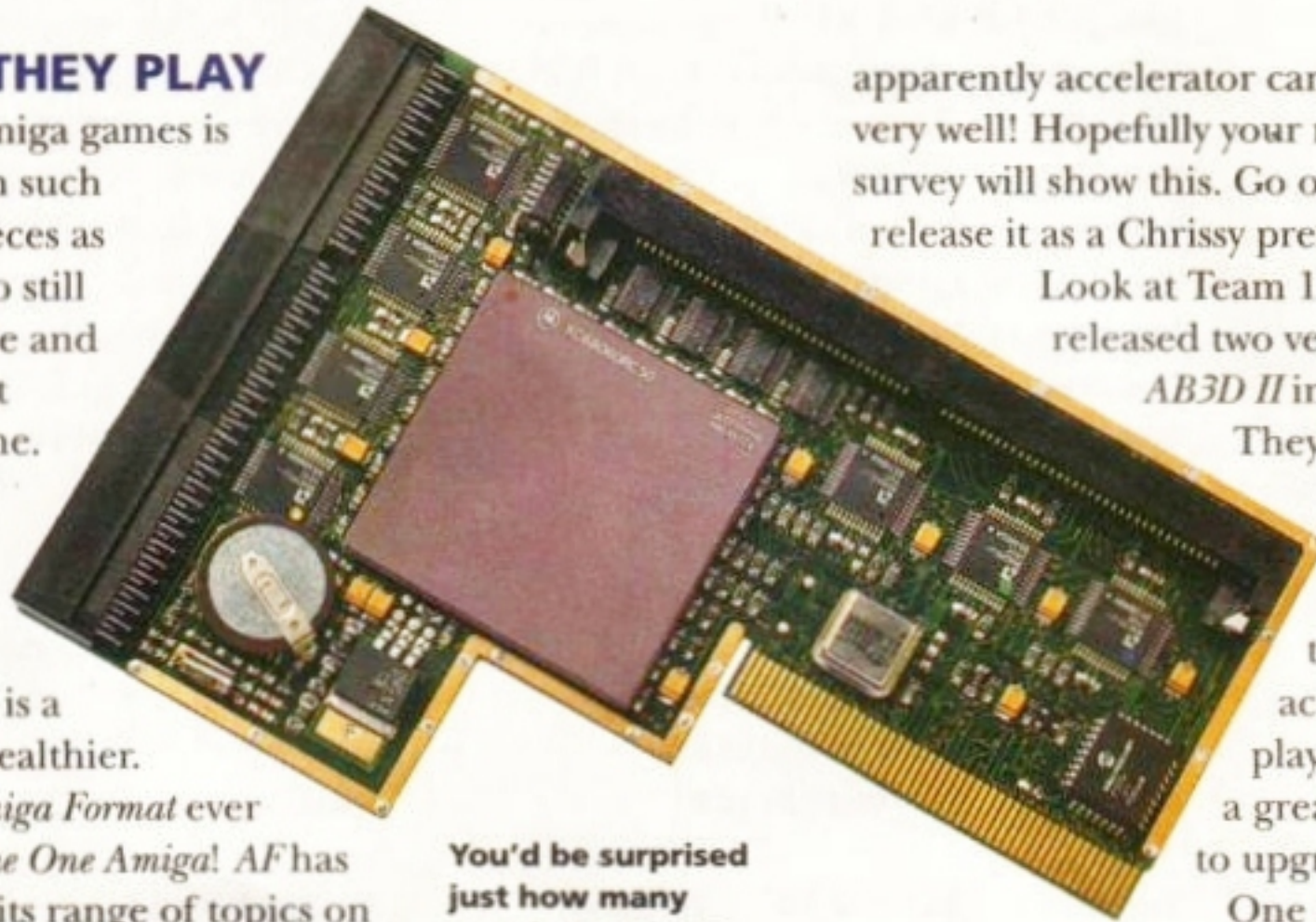
THE GAMES THEY PLAY

The lack of new Amiga games is obvious, apart from such stunning masterpieces as *AB3D II*, but you do still find what's available and review them until it hurts and then some. Plus, with all these independent software houses springing up, the Screenplay section is a bit chunkier and healthier.

I have read *Amiga Format* ever since the loss of *The One Amiga!* *AF* has filled the gap with its range of topics on everything Amiga. Yes, I've seen the light and what a bounty I behold when I part with my £4.50 at WHSmiths. Basically, it's a smashing read.

I always look at the readers' offers you have in case I can pick up a bargain. Recently I got *Super Tennis Champs* - You could expand this a bit and be on to a bit of an earner? A few oldies perhaps like *Gauntlet 2*?

Did you have any luck with your *TFX*/Ocean bit in your readers' survey? I think that Ocean would be surprised at the number of copies sold, for the little effort of releasing a finished game. Maybe they think that not enough people have accelerator cards, but



You'd be surprised just how many people now have accelerated machines.

apparently accelerator cards still sell very well! Hopefully your readers' survey will show this. Go on Ocean, release it as a Chrissy present!! Please?

Look at Team 17 who released two versions of *AB3D II* in one box.

They covered themselves because you didn't have to have an accelerator to play it but it was a great incentive to upgrade.

One more thing, I have a Speccy emulator,

but because of my '060 accelerator, things run at ZZZZZZooooooommm speed! The only games I can play properly are things like *Rebel Star* because my reactions are only human. Are there any speccy emulators out there, for the Amiga, that allow you to change the speed they run at? I have seen a PC speccy em which does this.

The only thing I can do is disable my '060. This does the extreme opposite and things run SSSLLLLLLLLLOOOOOOOWWWW!

Phil 'you'll never catch me alive with a PC'
Bennett
Aylesbury

Thanks for your comments, I'm sure you'll find AF much better value. We haven't yet compiled the results of the reader survey (we're still receiving them) but a cursory glance through shows that lots of people have the ability and the will to play TFX.

I have passed on your comments about Spectrum emulators. Off the top of my head, I don't have a solution for you, but I'm sure it will be covered in our emulator series.

FASCISM DOESN'T RULE

I have recently discovered the infiltration of Combat 18 propaganda via downloading an apparently innocent Amiga related document (Dev/asm/agagiode.lha) to Aminet.

What concerns me most is their openness of being a white racist International terrorism Organisation. Aminet has always been a clean, politic free international Amiga fraternity and therefore we must not allow any evil elements as such to get into the system. Please raise the awareness and do something about it.

T. Longman
Coventry

Well, it all comes down to freedom of speech doesn't it. Which is after all what the Internet is supposedly campaigning for - freedom of speech is for everyone, not just polite liberals.

The Gallery



WARP RACE

by Mark Sheeky
Crewe

Created using Imagine 4, this took Mark 50 minutes to render on an 030-powered A1200 with 32Mb RAM.



TERMIGHT

Let me start by saying, I have every copy of *Amiga Format* and this is the first time I have felt the urge to write in. Six months ago I opened an Internet account. I downloaded the necessary software from a BBS, and then proceeded to spend three or four months trying to get AmiTCP working. I asked local Amiga groups, BBS SysOps and anyone who would listen for help. I also went through my back issues of *AF* and read your Internet tutorials.

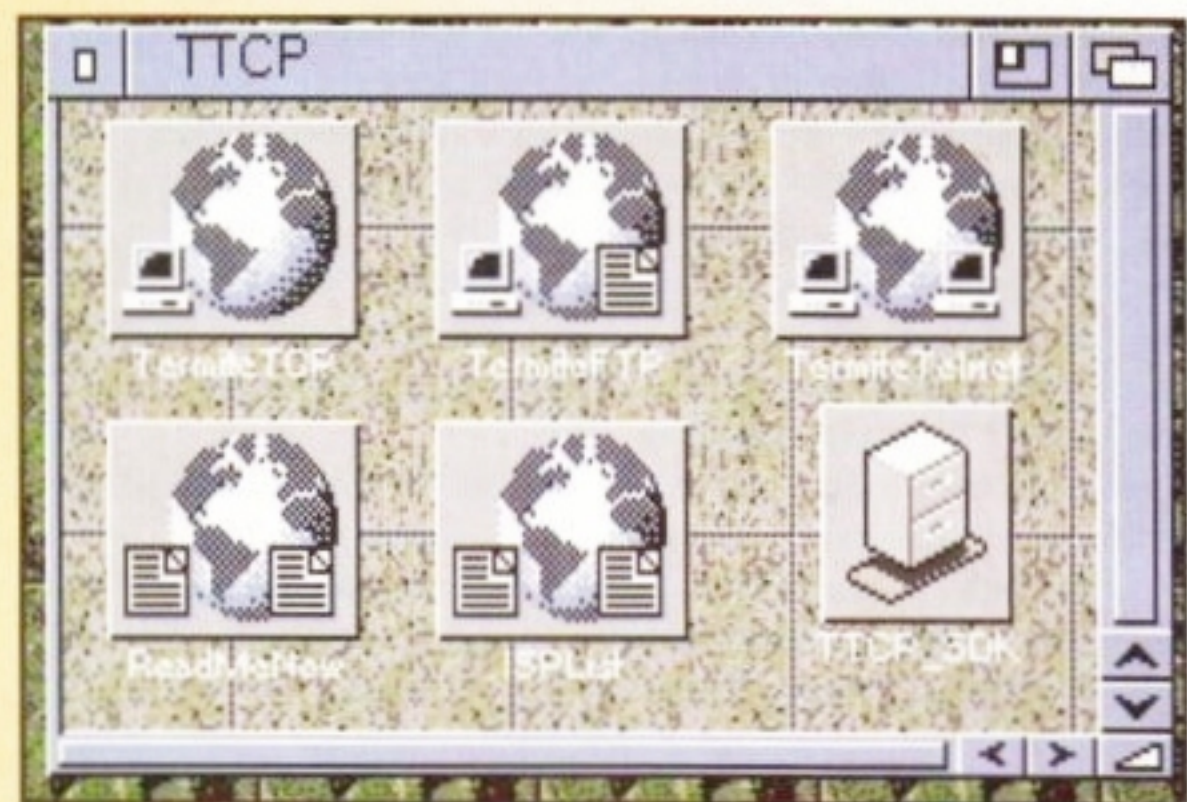
Nobody I asked either could or would help and then I saw an advertisement in *Amiga Format* for Termite TCP. It claimed it could get you on the net within minutes, I sent off for it and it did.

In the November issue you gave Termite TCP 70%, mostly because of its price – failing

to take into account that it can get a non-computer genius like myself on the net. Something I could not do before at any price.

Brendan Murray
(bmurray@indigo.ie)

Many people have found out all they ever needed to know from the sources you have mentioned, but of course we accept that a piece of software like Miami or Termite, that does a lot of the hard work for you, is a better solution. At the time of the AF Internet tutorials, this software didn't exist.



TermiteTCP has been well received by users confused by the intricacies of getting connected to the Internet.

However it is disturbing that obviously offensive political propaganda is being covertly spread via seemingly innocent files. Was this the author's intention? Or was his work hijacked by others?

FAULTY CONSTRUCTION

I have a gripe to do with the Reader Games section in *AF88* and the game *Project Shield* reviewed therein. There are two things here that I don't like/agree with, a) the "language: unknown" line, and b) the reviewers opinion that the game is technically something special.

OK, I'm willing to believe that it's a great game, and undoubtedly a lot of work has gone into it. If the author had written the 3D engine I would wholeheartedly agree with the reviewer, thing is, I'm 99% sure that he/she hasn't. I mean, – come on – guys, is there no-one there that recognises a *3D Construction Kit* (henceforth *3DCK*) game when they see one? *AF* reviewed it in two versions!

The crosshair in the centre of the screen combined with the funny mouse pointer (with the double vertical bars)

is a dead giveaway. I'm willing to bet that it also "shoots" with the lines from each corner of the viewing area to the mouse pointer.

Of course I've nothing against *3DCK*, though I haven't really played with it much, largely because I consider it too slow. And like I said above, I acknowledge that it still takes a lot of work to put together a game, especially

a good one, but "technically tremendous"? I don't think so.

Also I'm only 99% sure about this, which means there's a 1% chance that I'm wrong (it's been known to happen), in which case I will apologise profusely to both the reviewer and the author.

rdp03@uow.edu.au

The question we ask ourselves when we look at reader games is quite simply – is this a good game. I have seen, and I expect so has Andy, a great number of terrible games

Continued overleaf →



Whatever method was used to create *Project Shield* is irrelevant when deciding whether it is a good game.



LURKIN

by Jack Tomalin

Jack's been entering Gallery pictures for some time now. This was inspired by *Command and Conquer*.



PORTRAIT96

by James Taylor

Created using *Imagine 3.0*, this took 2.5 hours to render on an 060-powered Amiga.



TRIKE

by Keith Hannen

Keith sent us this lovely render of a trike but included no docs. Get in touch Keith!

MUSICAL TRUTH

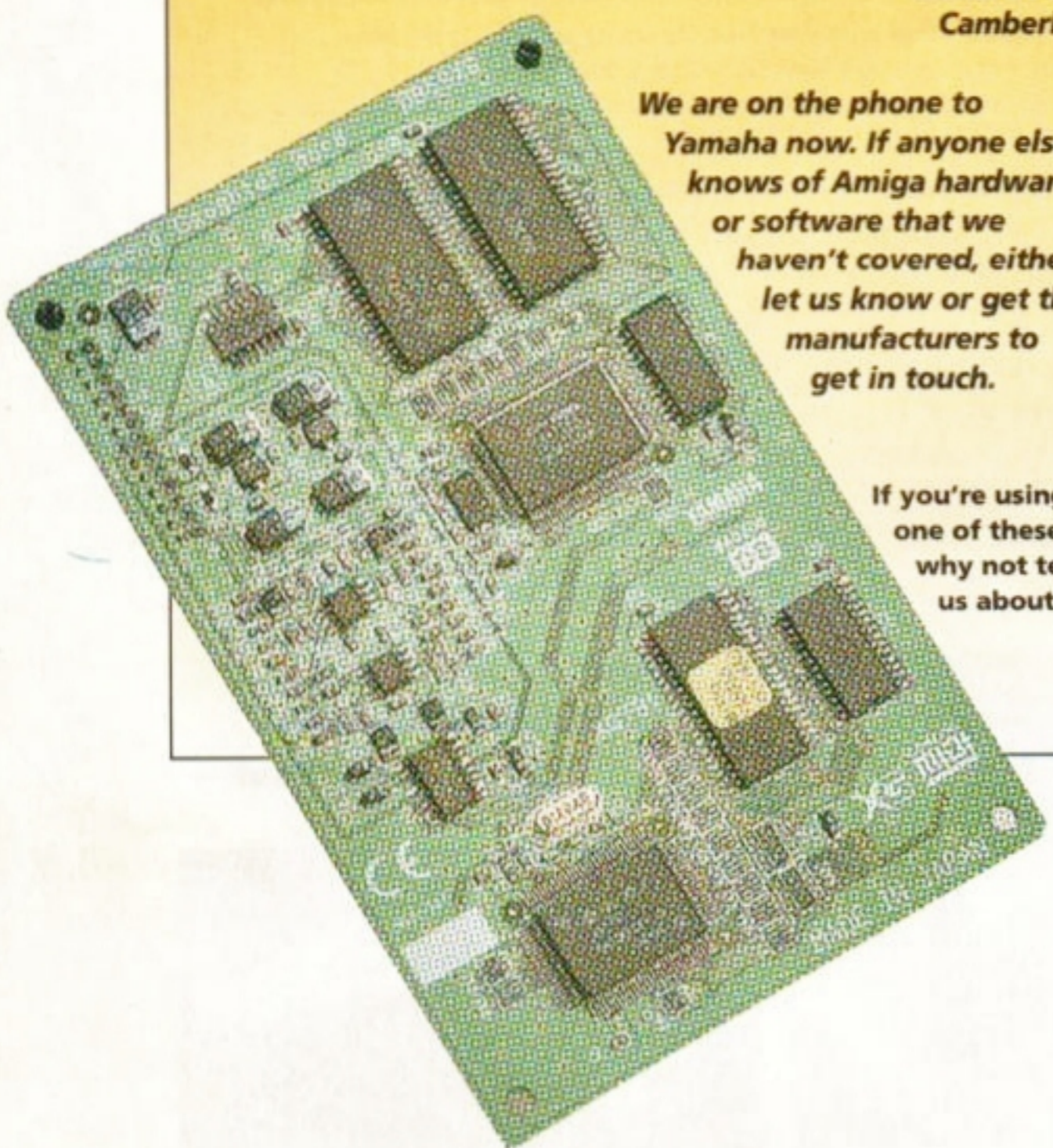
I went along to Live '96 last week, and on the Yamaha stand saw a demonstration of their new DBXG50 (or something like that). Anyway, it's the daughterboard that most of the PC mags, and *Future Music* have been raving about. I was just considering how much it would cost to buy a PC to run the card on, when the guy said that if you had a 'dead' machine like an Atari or an Amiga then you could still do the same thing using this. He then pulled out a box about the size of a US Robotics modem.

I now discover that it is the Yamaha MU10, and nobody seems to have reviewed it. The guy on the stand claimed that it came with everything to connect it with anything, and software for an Amiga. Basically I'm turning to you as the major Amiga magazine to see how truthful he was being.

Richard Peat
Camberley

We are on the phone to Yamaha now. If anyone else knows of Amiga hardware or software that we haven't covered, either let us know or get the manufacturers to get in touch.

If you're using one of these why not tell us about it.



← created using 3DCK. The thing about this game was that it was actually very playable, that time and care had gone into the construction of the objects and indeed the construction of the game.

I can sort of see your point, but where would it all end? Should we only accept games that have been written in pure assembler? I think not. And isn't it more important that the game is playable?

THE VOICE OF REASON?

Dear Long Hair Bloke, I have a few things to say:

1. Get your hair cut.
2. Get beardy bloke to shave his beard off.
3. Tell Sven Harvey not to slag AP off, no I'll do it myself:

Hello Sven Harvey, How can you slag off AP? In reviews you must say what makes the game bad so that we know why we shouldn't get it. So let's see what reasons you have...

- (a) It's shit (by the way AF if you're to truly copy AP then the abbreviation must be in italics).
- (b) That's it.

Well, a good argument there. Let's see how well I can slag off AF:

- (a) It agrees with Peter Hull that Graphics aren't everything, yet it gave *AB3D II* a good review. (what's that? The gameplay's good? Ahaha.)
- (b) It's not funny and the 'jokes' are ones that were made by AP, WHEN IT FIRST CAME OUT.
- (c) It's shit.

However I'm still getting your mag through a subscription until my AP one runs out, mainly for the Coverdisks. WHICH DON'T WORK ON AN A500.

So, piss off AP haters and in fact AF itself (you certainly won't be missed by me). You useless cretinous morons.
Geoff Pearce, 101652.266@compuserve.com

I never fail to be impressed by the flair, panache and literary skill of some readers. It's just a shame some of them have nothing to say.

THE REAL THING

I just have a few words to say. The first thing is that you said you awarded the *Reality Games Engine* (which my brother and I wish to purchase) 66% in the pages of your most recent issue but looking back at the review, you only reviewed the games and not the actual software application. Do you intend to publish a separate review or is that it?

On the subject of games, although it is very advanced, I find *AB3D II* very frustrating to play as it is very slow, even on my '030 enhanced 1200 – and it is too hard. I played it many times and I can't get past the second level. I'm going to try the Editor you have on the latest Coverdisk to see if that makes the game easier. Where can I get the patch for the editor?

Cormac McCamney
Dublin

The review in question was not of the Reality system itself, but of a set of games that had been produced with it. The Reality system is currently going through some updates and

possibly a change of distribution, and we will be reviewing it when the software is properly released.

PMA

I've seen people moaning and commenting on the newsgroups and in magazines that their machine is dead, but they're wrong.

Look at the new software developers and publishers who have been bringing us games. Look at Andy

As soon as the Construction Kit is finished we'll be bringing you a review.



Amiga Power – you either loved it or hated it.

Davidson who brought us *Worms*. His game is known by game users all over the world for being the most original. He's now bringing us *Worms: The Directors Cut* and *Worms 2*. Then take a look at *Breathless* which brought us a new look at games with 1*1 pixel. This game could have started a revolution in the Amiga games industry, it showed us that there was a lot more to be discovered about our machine. This revolution has continued on with *AB3D II* and will continue further with *Burnout* from Vulcan Software.

Last year there were no CD-ROM games for the Amiga now you'll find they're on there way with the release of *Demistar*, *Kang Fu* and maybe even *Myst*.

Looking through *AF*, you can see a new generation of games developers. Some might say that their games aren't all that good but just imagine what they'll be able to achieve in a few years time.

Vulcan Software have proved this to us. Many magazines didn't like *Valhalla*, but now Vulcan plan to bring us six new titles of a brilliant standard. These are the type of people and companies that we should cherish. They are keeping the Amiga alive and they are the future. If we brush them aside then we have no chance.

I've had enough of people saying my machine is dead. Dead means without life but I can tell you without hesitation that there is life in our Amigas. But we must not sit back, we should be telling software and hardware companies what we want. We should not be saying I'll let everyone else do it and I've got no time. Make time. I personally emailed a games developer and gave him my support and he emailed me back thanking me.

You can make a difference so don't become a part of the problem by moaning that your machine is dead. Look at all the positive things that have happened and are still to come.

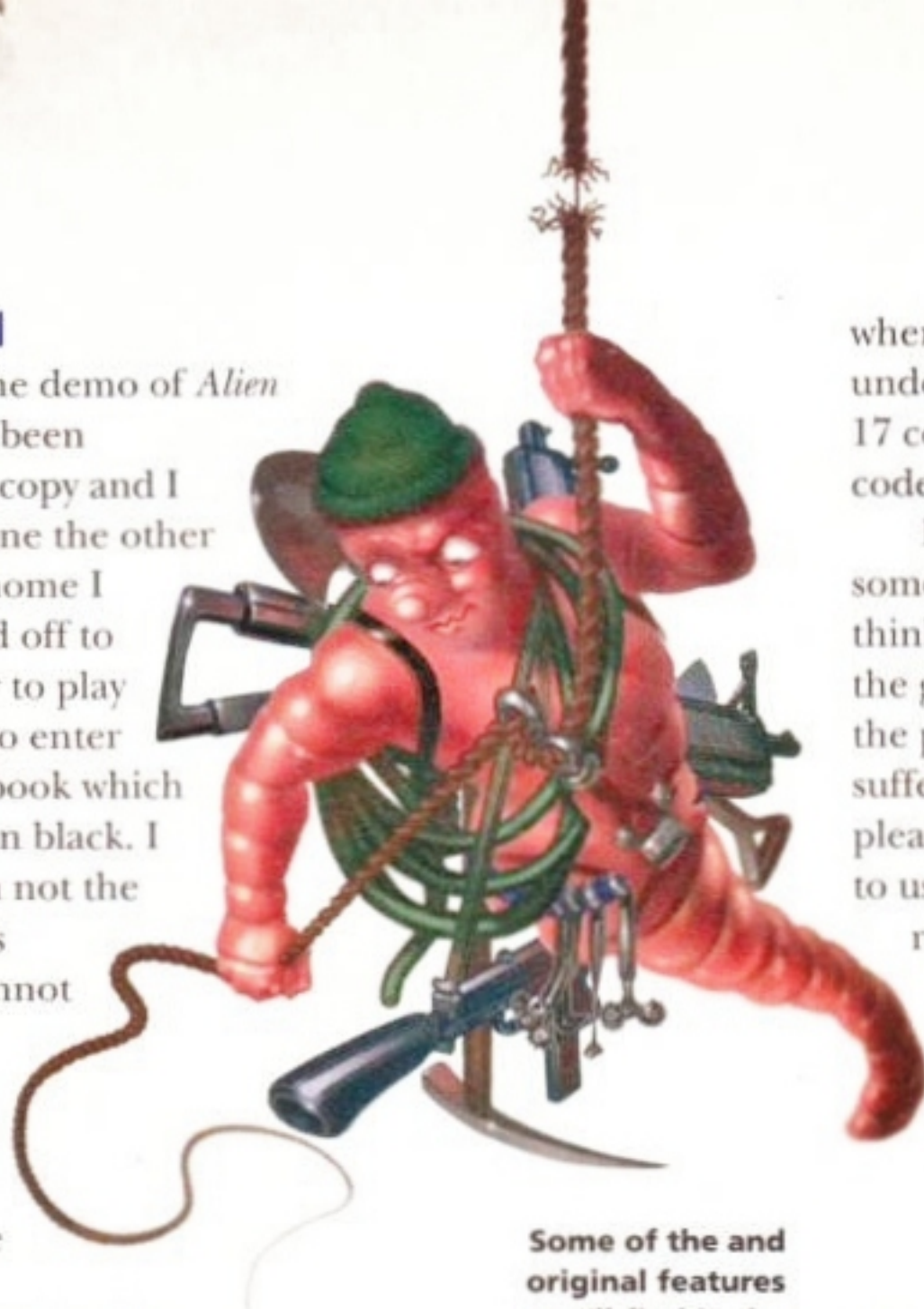
author unknown

I'm sure lots of our readers do remain optimistic about the future and of course we will be reviewing all the games you mentioned when they are released.

PIRATE PAIN

Ever since I got the demo of *Alien Breed 3D II* I have been looking out for a copy and I managed to get one the other day. When I got home I was really cheesed off to find that in order to play the game I have to enter the code from a book which is printed black on black. I am sure that I am not the only one with this problem but I cannot read the numbers so I had to go and pay £20 for somebody to type it all out for me.

Had I realised that you needed a code book in the first place I would not have bothered buying the game even though it is excellent – the code will keep getting lost in my paperwork thus putting me off playing



Some of the and original features you'll find in the latest version of *Worms* include the interestingly named **Concrete Donkeys**.

when I want a break from my work. I understand it's to avoid piracy but Team 17 could use a system so you only need codes when installing the game.

I just wish somebody could do something about these dozy idiots that think it is good to rip the artists off for the games that they create and make the people who do pay for the software suffer. A note to Team 17 – could you please print the codes, if you are going to use them, in clearer writing or write a registration into the game so that you may be able to trace the pirates. Lets hope that in the future there will be some better methods for controlling piracy.

Graham Clark
dolphin@gramarye.u-net.com

Pirates always have been and always will be a major problem in all software markets. While we at AF can well understand the paranoia of games companies who have invested greatly in terms of time and effort, some protection methods become a severe



A fab game – shame about the invisible codes.

deterrent to playing the game. In the case of *AB3D II*, the codes are printed in glossy black ink on a matt black background, presumably to prevent photocopying, which is a severe deterrent to anyone wanting to play the game whether they paid for it or not.

As you say, it is a simple matter to type out the codes, so why bother? All that happens is people with poor eyesight or people coming home from the pub after a few Guinneses can't play the game they paid good money for.



Letter of the Month

WELSH RAREBIT

Since purchasing my Amiga, about four years ago, I have met many people who are only too keen to mock and insult my choice of computer. I put this down to the fact that most people neither know nor care about anything that can't run *Quake* – or other similarly dubious delights. People will always insult things they know nothing about, and that, as far as the Amiga is concerned, is most of the population of this country.

Commodore messed up, that we all know. Escom didn't do very much to improve things, and so far Viscorp still haven't removed their fingers from their rear ends. So the ignorance will continue within the non-Amiga owning community. This harms the future of the Amiga. However, and at last the point of this letter, another thing that harms the future of the Amiga is the ignorance of the people that do own one. I haven't met many other owners, but those I have met have not really cheered me up very much.

One of them had a large collection of software. Unfortunately almost all of it was pirated games. He had over a thousand, which struck me as quite a lot. He also had an original version, which he probably pinched, of *Pen Pal* which he freely criticised as being badly written – all the output from it was filled up with odd characters that he hadn't put there. I tried to explain the concept of printer drivers to him, but if it involved more than turning the power on and sticking a disk in the drive, he didn't want to know.

Another was amazed that I was on the Internet. "I thought you had to have a PC to do that," he said. He was equally wowed by the fact that I had a printer other than a dot matrix attached. Again he thought that was beyond the reach of anything other than a PC. He thought a hard drive was a chip you fitted

somewhere, and when I said I had just bought a RAM board he responded "What's that then?"

The final person I'll mention thought the only thing you could do with an Amiga was play games, and could offer no satisfactory reason for the presence of a keyboard, other than text adventures (he was a bit thick mind).

I am not, by any means, saying that I am an Amiga wonder. I still get the shivers thinking about writing an ARexx script, I still haven't worked out *Intellifont* to my satisfaction. I can't work out what half of the output from *SnoopDos* means and I must confess I haven't paid all my Shareware fees yet. I have however taken the trouble to find out as much as I can cope with about my Amiga, do what I can with it, and pay for things as soon as I am able (never believe that teachers are rolling in it).

I hope I haven't come across as patronising to any other user. The point I am trying to get across is that if the people I have mentioned above are fairly typical of the 'established userbase' of the Amiga, who are supposedly supporting the machine then we might be in trouble. You must get to know your little silicon friend before you consign it to the scrap heap, and join the multitude already making regular, sizable contributions to the Bill Gates retirement fund. It can do considerably more than you think.

I have finished. Goodbye, and keep up the good work on the mag. Could you include my email address, and the fact that I would love to correspond with any other Amiga owners who find themselves living in a virtually Amiga interest free zone, or anyone else for that matter! (especially in the Cardiff area)

Matthew Allen
mallen@thenet.co.uk

Well, we are entering another age of a form of computer illiteracy. When home computers first became popular, there was a generation who grew up with them. They were new and exciting and people wanted to learn everything they could about them. These days computers are just another fact of life. People may want to know how to turn them on and play games or run applications, but that's as far as it goes. It is sad, because these people never realise the power, flexibility and creative ability a computer like the Amiga can offer them. Hopefully every issue of *Amiga Format* helps to educate even experienced users in some new aspect of their machine.



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WANT TO CREATE YOUR VERY OWN AMIGA GAMES, DEMOS, AND EDUCATIONAL SOFTWARE, BY USING NOTHING MORE THAN YOUR COMPUTER'S MOUSE?

Have you ever dreamed of creating your very own Public Domain or Commercial software products without having to program?

Well now it is no longer a dream - it's REALITY!

REALITY - THE ULTIMATE SOFTWARE CONSTRUCTION KIT is a REVOLUTIONARY new product from B.P.M. Promotions, a company involved in the AMIGA software market for over five years. This product is a BREAKTHROUGH in software design and allows anyone with an AMIGA computer, regardless of their age or intelligence, to create both Public Domain and Commercial software products in virtually no time at all using nothing more than their computer's mouse! It can be used to create games, demos, educational software etc, much much faster and easier than ever before throughout the history of computers! REALITY is like nothing you've ever seen before on the AMIGA. Now for the first time you can access the awesome power of your computer with bewildering ease and use it to create TOP CLASS AMIGA software in a few days by doing nothing more than clicking the buttons on your mouse or moving the mouse cursor around the screen! Everything is controlled from user friendly buttons and menus on the screen - that's it! - it's so easy you will not believe it! No programming is required whatsoever!

Here is a small example of what you can achieve in minutes with Reality by using nothing more than your Amiga's mouse:

- Create HUGE fully detailed scenery backgrounds for your games using the background creation editors!
- Make your games main character shoot all sorts of different weapons each with different power values!
- Define monster attack patterns and choose from the HUGE amount of already made variations!
- Create intelligent enemies that home in on your main character!
- Add text messages to the software with hundreds of different styles of text fonts to choose from!
- Create SUPER intelligent GIANT mid level and end of level monsters just like the very best commercial games!
- Produce scenery that your main character reacts to: Ladders, Ropes, Platforms, Traps, Switches etc etc!
- Define complex puzzles to make your games much more interesting!
- Make other games characters that your main character can interact and communicate with!
- Select and define all sorts of weapons, bonuses and objects that your main character can collect and use!
- Create characters that have to fight each other in a beat 'em' up - STREETFIGHTER II Style!
- Produce ALL sorts of demo effects from groovy text scrollers to on screen 3D rotation just like the very best PD demos!
- Create Educational software from a simple slideshow to a full blown disk magazine!
- Add graphics, music and sound effects to your software with ease!

The list is ENORMOUS!!! - Test your software in seconds to see if everything is working the way that YOU want it to! There's no need for any slow compiling or testing like certain other packages!

REALITY can be used to create many types of different software products! It's ideal for TOP notch games! Create HIGH speed shoot 'em ups, Addictive scrolling platform games, Beat 'em ups, Point and Click Graphic Adventures, HUGE Arcade games, Puzzle games, Racing games, Card games and much much more! Even create your own mind-blowing special effects demos or user friendly Educational software! Just look at the screenshots in this advertisement and see just what this system is really capable of!

Over four man years of work has gone into the development of this software! The result is: **A STATE OF THE ART SOFTWARE CREATION SYSTEM!** It's versatile - It's easy to use - It's incredibly fast! It's the biggest ever breakthrough in Amiga software creation and has already been used to create twenty commercial games and a multitude of PD software!!!

If you can use an AMIGA you can use REALITY! All the hard work has been done for you! With once complicated programming routines reduced to simple mouse actions that anyone can understand! That's the hidden power of REALITY! Absolutely no knowledge of programming is required whatsoever! Reality is unique! It is a completely new way of creating software!

MORE THAN TEN 90% SCORES HAVE BEEN AWARDED TO REALITY SO FAR FROM MANY DIFFERENT AREAS OF THE AMIGA COMMUNITY!

What you get!

The very latest version of the REALITY software construction kit which incorporates a whole batch of useful and essential utilities. These include: an Animation and Sound Studio, a Graphics toolkit, a Background creation system, Picture and Introduction creators, a FULL blown paint package, Text editing and disk utilities plus much much more! You'll also receive a fully detailed user friendly instruction guide and a handy hints and tips guide! Two further guides that will show you how to make two full blown games from scratch! Two full blown commercial games that have been created using REALITY for you to adapt and learn from! Issue one of the REALITY USER CLUB disk magazine! Two packed disks full of sound effects, music tracks and a MASSIVE amount of graphic images that can be used in your own software! These include characters, enemies, weapons, bonuses, scenery, fonts and MUCH MUCH MORE!! You get everything you need for creating your own full blown top quality software with ease!

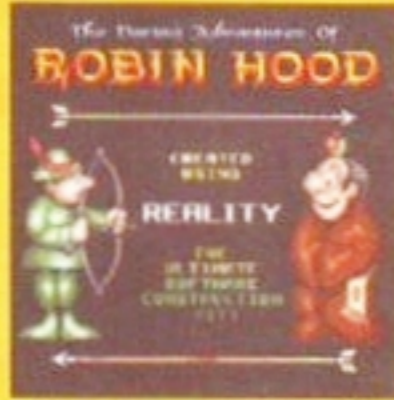
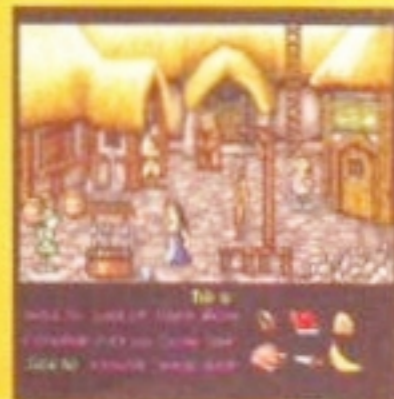
You'll also get FREE membership to the Reality User Club!

This will provide you with a phone helpline, a pen-pal list allowing you to contact and work with the already-MASSIVE REALITY userbase from around the globe! You will also have access to a HUGE range of software that has been created using the REALITY system and 1000's of graphic images, sound effects and music tracks which you can use in your own software! We are willing to publish any software that you create using REALITY or if you wish you can have other companies publish your work! The REALITY user club can supply you with ALL the graphics, music, sound effects and ideas that you need to create superb software with this system. ALL the hard work has been done for you!

So what do you have to pay for this totally amazing system?

Only £29.99! This product is worth many times this price and only due to forecasted large sales, low cost advertising and direct sales to the customer are we able to offer it at this unbeatable price! By creating only one piece of software you should get your money back many many times over! How much software do you wish to create? What more can we say other than you would be absolutely crazy not to take up this very special offer! Creating software is much more interesting than using it, and REALITY is the perfect tool! Please note that the REALITY package is compatible with ALL AMIGA computers and is hard disk installable!

Screenshots of games created with REALITY



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ALL AMIGAS!

AMIGA FORMAT COVER CD



Your guide to the *Amiga Format* CD.
Ben Vost was determined you wouldn't miss out on any of the great programs and utilities.

LOOK_HERE_1ST!

This should be your first port of call when you put the CD in your drive. The start_me script doesn't need to be run if you boot up from the CD, but otherwise will come in handy. Make sure you read the Submissions advice if you're tempted to send us some of your work and have a look at some of the stuff we have here:

Handy_Tools

As detailed last month, this drawer contains the software we use to put together your CD every month. Try out *PowerSnap*, *MultiCX* and *ReKeyIt* to get your machine running really well.

AF_on_the_web

The *Amiga Format* website, the Nova Design website, more of John Shepard's acerbic wit and Mike Smith's HTML tutorial - what more could you want?

Animation

More amazing Mand2000-generated animations this month, along with a demo of the current version of the



program. Nick doesn't get off so lightly either, since his mammoth *Lightwave* animation that he was busy creating last month is now on this month's disc, along with

OctaMED 6 and Bograts

Both of these programs are detailed in full on our floppy disk pages.

Cologne show interviews

Owing to the usual manic time constraints involved in a four week schedule, we have only been able to get these interviews onto our CD in the rather non-Amiga specific Quicktime format.

Now this isn't all bad. You may have noticed while trawling through the contents of the CD that we have a program called QT on the disc. You can use this to play back all the footage of Jason Compton and Wolf Dietrich, but be warned that it does need to load it all into RAM first, so you will need a large amount of free RAM to see these interviews. Oh yes, you'll also need a reasonably fast processor and either AGA or a CyberGraphx compatible graphics card too.

COVERDISKS

Get to grips with this month's free complete software package *OctaMED 6*, fully detailed on the floppy disk pages starting on page 108 and our extensive tutorial feature which begins on page 18.

PD_SELECT

We have eight demos in our selection this month. We were going to have more only a couple of them had naughty bits in and we felt that they weren't suitable for the youngest of our readers no matter what they might say themselves.

READERSTUFF

We have a bumper crop of more than 130Mb of material from our readers this month, mainly thanks to the winner of this month's prize for serious software:



An example of some of Femi's sterling work for the AFCD.

Video Backdrops

AFCD9:ReaderStuff/Femi_Hasani/

Yes, Femi has been sending us his great backdrops and digitised pictures for a few months now and we felt it was about time we recognised his hard work by giving him our reader award for this issue.

Even if you aren't into video on your Amiga take a look at the extraordinary quality Femi has achieved with VLab and his video camera.

Quicksilva

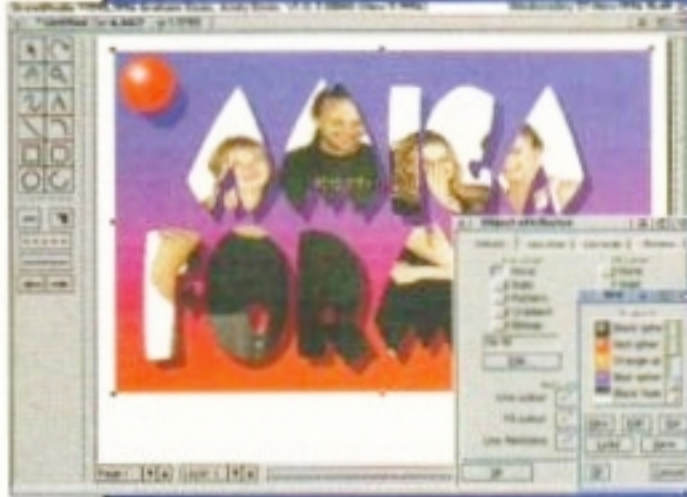
AFCD9:ReaderStuff/Maff_Cottingham/

Well done Maff, you win the prize for the best reader submitted game this month. Maff's *Quicksilva* is a nonsense platform game with hints of *Sonic*, *Gods* and a rather tasteless storyline. For that you win £30.

SERIOUSLY_AMIGA

COMMERCIAL

Our commercial selection this month includes not one but two CD writing software demos. You may remember *BurnIt* from a couple of months ago. That's back in a slightly updated version and it is joined by *MakeCD* from Angela Schmidt (who is also responsible for all those ace *Meeting Pearls* CDs). We have what I hope will be the last of the *PageStream 3* patches, along with a patch to a new version of *SAS C* (believe it or not). Finally there's an update for *X-DVE* owners to v2.60.



DrawStudio Demo

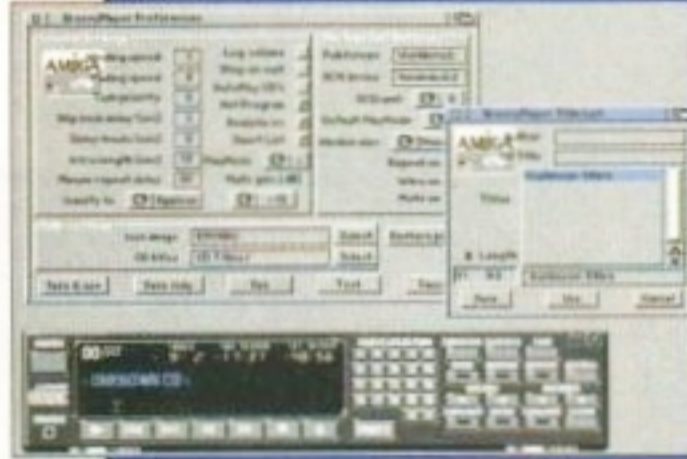
AFCD9:Seriously_Amiga/Commercial/DrawStudioDemo/

Our last surprise this month comes in the form of *DrawStudio* which we have a demo for on this month's CD. It comes in both normal and FPU versions, so choose the best one for your Amiga. Do take a look at this program, I personally haven't seen a better bit of software all year.

SHAREWARE

With nearly 40Mbs of new serious shareware on the CD this month, it will be hard to pick out the best titles, but here is

the Amiga Format choice - miss these at your peril:



GroovyPlayer

AFCD9:Seriously_Amiga/Shareware/CD-ROM/GroovyPlayer/

This great looking audio CD player will have your PC and Mac owning friends groaning in envy. It even has all the functions you'd expect from a top-of-the-range Kenwood Hi-Fi. Molto impressivo!

YAM

AFCD9:Seriously_Amiga/Shareware/Comms/Internet/Mail-related/YAM/

For those of you with a POP3 mail account, here's the very latest version of the world's best POP3 mail program - YAM.

Thor 2.4

AFCD9:Seriously_Amiga/Shareware/Comms/Non-Internet/Thor24/ I know it isn't in the Internet drawer, but there are a lot of Thor users who are using it for QWK or Fido mail. Anyway, because Thor is such a pain to set up for everyone, the archives have been placed in this drawer for you to install just what you require from the program.

Deep Space Nine

AFCD9:Seriously_Amiga/Shareware/Graphics/3D/DS9/

There is a very nice *Imagine* model of said spacestation to be found here.

Thai fonts

AFCD9:Seriously_Amiga/Shareware/Misc/Want_some_Thai?/

This drawer contains a Thai bitmap font and a keypad suitable for use with it.

Guide to the American Constitution

AFCD9:Seriously_Amiga/Shareware/Misc/Constitution/

No not anything to do with stomachs, but an interesting, if as yet incomplete, AmigaGuide to the way the North American Constitution was formed and ratified. See, it's not just Amiga stuff that we give you...

Assorted add-ons and patches for programs

AFCD9:Seriously_Amiga/Shareware/Program_patches/

This drawer contains quite a few add-ons to programs like MUI and BGUI and new import/export modules for the programs *ImageFX*, *Photogenics* and *XiPaint*.

Ordering

AFCD9:Seriously_Amiga/Shareware/Workbench/Ordering/

This is a cracking little Freeware file manager. It gets directory listings incredibly quickly and while it doesn't have the polish of *DOpus* or *DiskMagic*, it's more than capable enough for everyday use. Everyone should definitely try this one out.



SCREENPLAY

COMMERCIAL

In addition to the headlining *Bograts* we also have the following commercial demos on our CD this month:

Virtual Karting Deluxe Demo

AFCD9:ScreenPlay/Commercial/VKDeluxe_demo/ Fabio Bizetti's top-scoring 3D race-em-up gets updated. New features include an easy mode and a cheat mode that lets you upgrade your Go-kart's engine power, transmission ratio and grip. The only downside to this demo is that it exits after five minutes of play.

Jet Pilot

AFCD9:ScreenPlay/Commercial/JP-1/ A brave leap into unknown gaming territory for Vulcan with this entertaining flight sim that gets as complex as you want it to be. Pilot the powerful F-104 fighter/bomber in umpteen missions deep into enemy-held territory.

SHAREWARE

AFCD9 is another treasure trove of brand new and updated games from all sorts of sources. One game you should make a point of trying out though is:

Aerial Racers

AFCD9:ScreenPlay/Shareware/Aerial Racers/ Ever played *Skidmarks*? Of course you have, and now you can play this shareware version of it called *Aerial Racers*.

DISC NOT WORKING?

If the CD is defective, please return it to the address below. Please make sure you have followed our installation procedures correctly to ensure that there is a physical problem. Please send the CD along with a description of the fault plus a self addressed envelope. Return postage will be paid. Ablex Audio Video Limited, Harcourt, Halesfield 14, Telford, Shropshire TF7 4QR

A CD should only need replacing if the CD itself cannot be read. If, instead you are experiencing problems with an individual demo or application phone our technical support line. This is open between the hours of 2pm and 5pm on Tuesday. Tel: 01225 442244. Fax: 01225 732341. Email: amformat@futurenet.co.uk (put "Coverdisk" in the subject line of your message to ensure it is processed swiftly)

Please note that the helpline staff provide assistance with technical problems directly related to our cover CD and cannot provide training on the software or hardware in general.

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AMIGA
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nine

AGA

Experience



We want you to really enjoy all the stuff on this special second CD so **John Kennedy** has produced a comprehensive guide to the AGA Experience.



Boy are you in for a treat! This month we've managed to secure one of the most popular CD-ROMs ever produced for the Amiga – just for you. This disk is crammed with games, utilities and demo programs designed to help you get the most from your Amiga A1200 or A4000. It will take you months to find everything which is hidden on it, and we think you'll agree you've got a bargain.

If you can hold yourself back, pause for a few seconds. Although this CD was designed from the outset to be as instantly accessible as possible, many of the programs on the CD require a few "assigns" to be set up. These are special settings which tell your Amiga where to look for particular files: for example, the Animations need to know where the animation player program is.

All you have to do is click on the icon marked "Clickme!" and this will be taken care of. There are a few more changes you might like to make (see "Ready Steady GO!"). These settings are only temporary and no changes will be written to your floppy or hard drives. Now stand by for some awesome AGA action!

INSTANT GRATIFICATION

(AGA_ANIMATIONS)

Want to be impressed right now? Easy – open the directory called "AGA_Animations" and open the "Ready_to_Run" drawer. Now double-click on the file called "SpaceDock32". Neat huh? You'll find other animations in this directory, including a very impressive MPEG film.



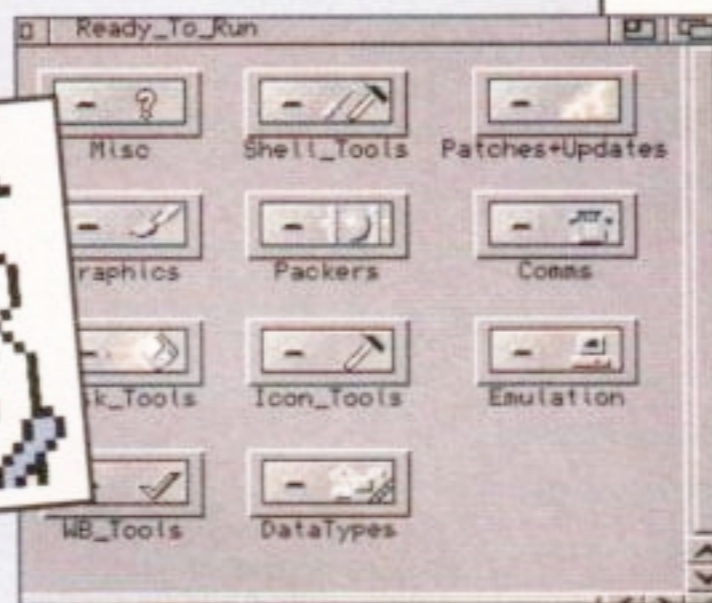
"Permission to dock?" asked Capt. Picard. We're coming in anyway he thought to himself.

LIGHT ENTERTAINMENT (AGA_DEMOS)

The Amiga's demo scene is where you'll find staggering graphics. Look in the AGA_DEMO drawer, and you'll find the "Entertainment" directory is crammed with amazing graphics and sound programs. All you have to do is load AGA_Exper1.1 and you'll know what colour is all about. Run SCX-Alien to see some wicked solid 3D manipulation.

USEFUL UTILITIES (AGA_UTILITIES)

The jewel of this CD is the vast collection of utility programs hidden away. You're going to be beside yourself when you discover the vast range of hard disk repair programs, CD file systems, terminal emulators, icon editors and dozens of Workbench commodities. There are even versions of *MagicWB* and *MUI* to update your icons and replacements for the Amiga Shell.



It's simply packed full of programs you'll soon wonder how you ever did without.

PROGRAMMERS' PARADISE (AGA_PROGRAMMERS)

Information on making the most of the AGA chipset is hard to come by. What information there is has been collected and stored in this directory. You'll find C and Assembler source code explaining the joys of AGA programming and chunky-to-planar routines, as well as vital coding articles and example programs.

MUSIC MAESTRO! (MUSIC_MODULES)

Here's something which is almost impossible: could there really be more minutes of great tunes stored on this CD than there is on an

SHOW ME!

(AGA_SLIDESHOWS)

More graphics than it's possible to imagine – there are hundreds of images ready to pop up on your Amiga screen, including some exclusive images from some top feature films. Cor, it's better than getting it out on video!



You've watched the movie, heard the soundtrack, now view the stills on your Amiga.

ordinary audio CD? You can find out for yourself by checking out the large number of music modules. They range from Funk to Techno and Rave and will auto-play when you click on them. Just hook up your Amiga and start listening.

DMS DYNAMITE

Although there are hundreds of utilities and programs which can be run directly from the CD-ROM, there are many more programs stored in DMS format. DMS is a method of compacting an entire floppy disk and storing it in one file. In order to use the programs stored in this way, you'll need a blank disk to unpack the software onto. Unpacking is easy: simply click on the icon of the packed program and you'll be asked to insert a blank disk. Wait a few moments, and you'll have a disk full of software to use as normal. If you want more control over the DMS process, there is a utility on the CD-ROM called "EasyDMS" which provides a graphical front end.

RENDERED SPEECHLESS

We haven't forgotten you 3D fans either. Not only will you find dozens of 3D models for most rendering packages, but articles and utilities as well. There are plenty of files of interest to users of *Imagine*, *Lightwave* and *Real 3D*. As if there weren't enough on this CD, already!



256-colour pics will look truly impressive.

GRAPHICAL WONDERS

(AGA_PICTURES)

The AGA chipset is renowned for its graphical abilities, and that's why you will find some stunning examples of artwork on this special AGA CD-ROM. Pictures are stored in HAM8 and 256-colour modes, ready to display when you click on them. You can also load them into your favourite paint program. You're bound to find plenty of images which will take your breath away!



AGA PASTIMES

(AGA_GAMES)

Ready to test yourself? You'll find dozens of action arcade games and brain teasers. Shoot-em-up fans will love *Deluxe Galaga*, and cerebral sorts will enjoy a game of *Uchess*. Retro fans should look out for *Deluxe PacMan* and *Poweroids*. And if all these aren't enough, there's an entire drawer full of *Doom* clones to test your hardware to the limits.



Test your chess skills against the computer in this colourful version of *Uchess*.

READ ALL ABOUT IT!

Not had enough yet? Don't worry, there's heaps more. For a start in the "AGA_texts" directory you'll discover hints and tips for all AGA-owning Amigans.

In the "Diskmags" drawer there's enough material to keep you reading until next month.

Articles, reviews and gossip from the Amiga's best non-paper magazines have been stuffed in this drawer. And it's not all computer related news: watch out for the latest Alien and UFO stories... Well that's all we've got room for unfortunately but there's plenty more so have fun exploring.

READY STEADY GO!

To get the most from your AGA Experience CD-ROM, you should perform the following simple steps.

- 1 Make sure you are using an Amiga with at least Workbench 2.04. If you have an Amiga with Workbench 3.0 (such as an A1200) or 3.1 you will be able to make use of many more of the programs and utilities. As the name suggests, an AGA chipset is almost essential!
- 2 Ensure you are using a screen mode with at least 8 colours. You can change the screen mode from the Workbench Preferences program "ScreenMode" or else click on the icon called "ScreenMode.prefs" (this will change to an interlaced display which may flicker on some systems).
- 3 If you aren't already using *MagicWB*, the colours may appear jumbled. Click on the icon "ClickForColours".
- 4 If you are using a screenmode with 16 colours or more, the colours may appear jumbled. If they are, click on the "MagicColours" icon.
- 5 If you would like to change to the suggested typeface, click on "Change Fonts".
- 6 Click on the icon marked "ClickMe!"

THATS IT!

EXCLUSIVE

Amiga Format special Offer

If you enjoyed your free AGA Experience CD then you might like to try version 2. In an exclusive deal with SAdENESS we bring *Amiga Format* readers the AGA Experience 2 at a special price of £12.99. (RRP £20)

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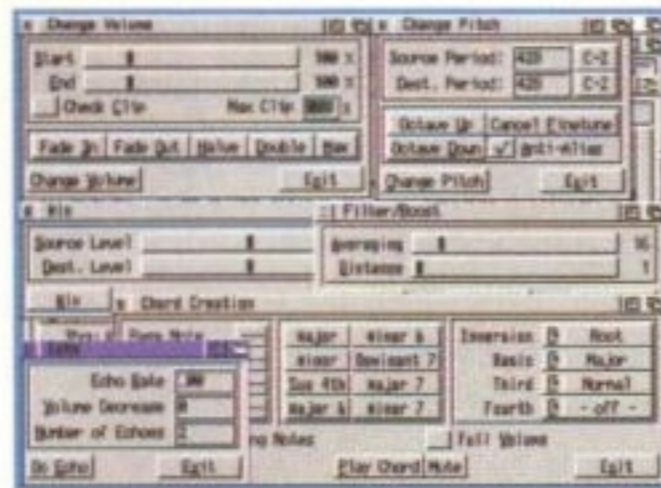
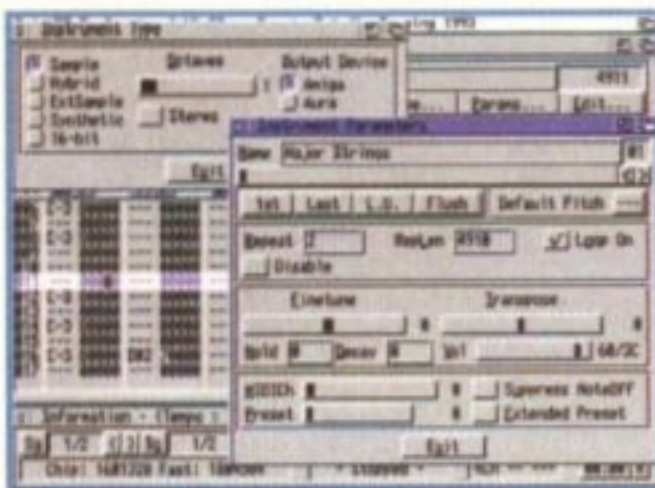
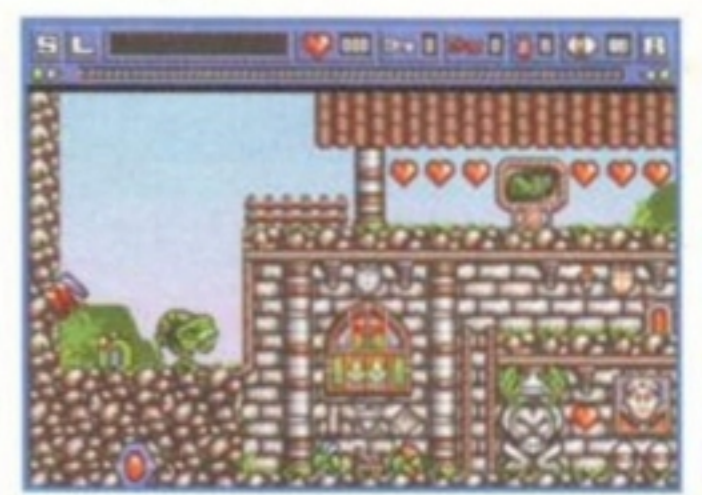
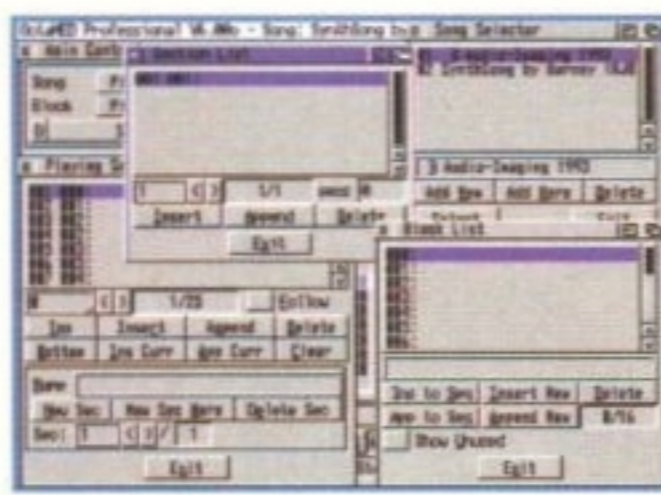
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For a full review of the excellent Bograts turn to page 34

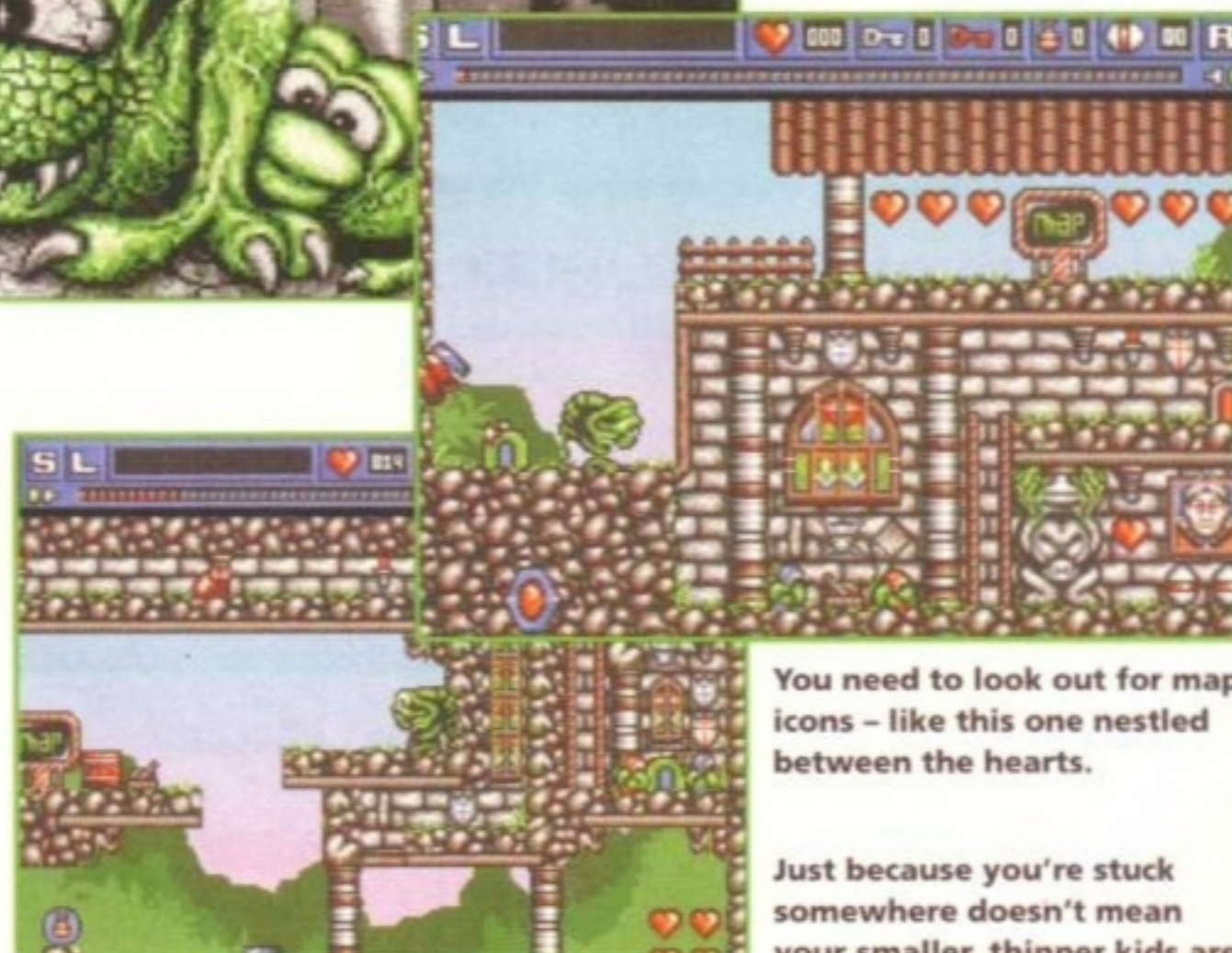
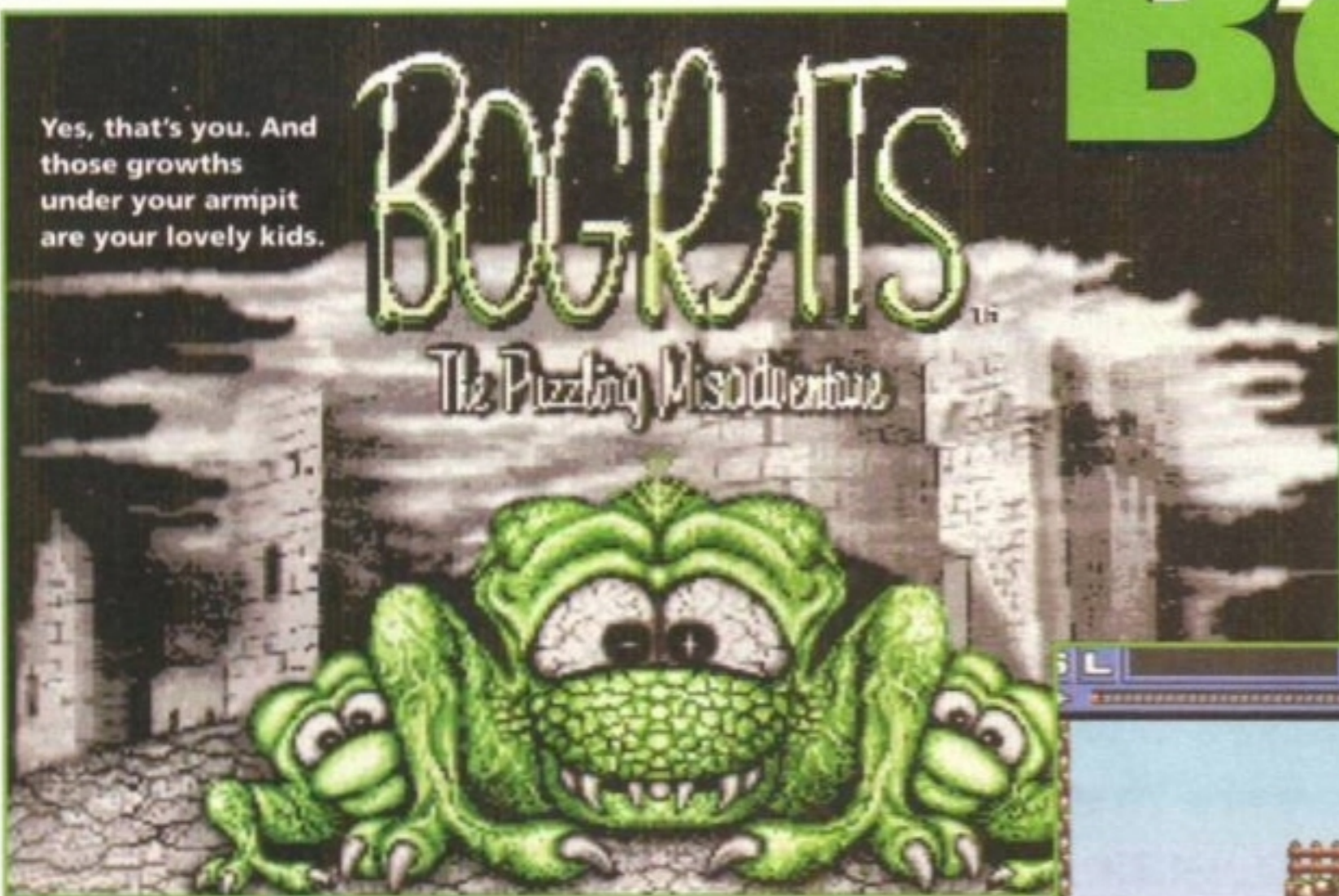
AMIGA FORMAT COVERDISKS



Create musical masterpieces in minutes with this month's fantastic giveaway – the Amiga's favourite – OctaMED 6.

David Taylor introduces the new game demo from Vulcan. Brain-bursteringly addictive but hair-tearingly hard!

Bograts



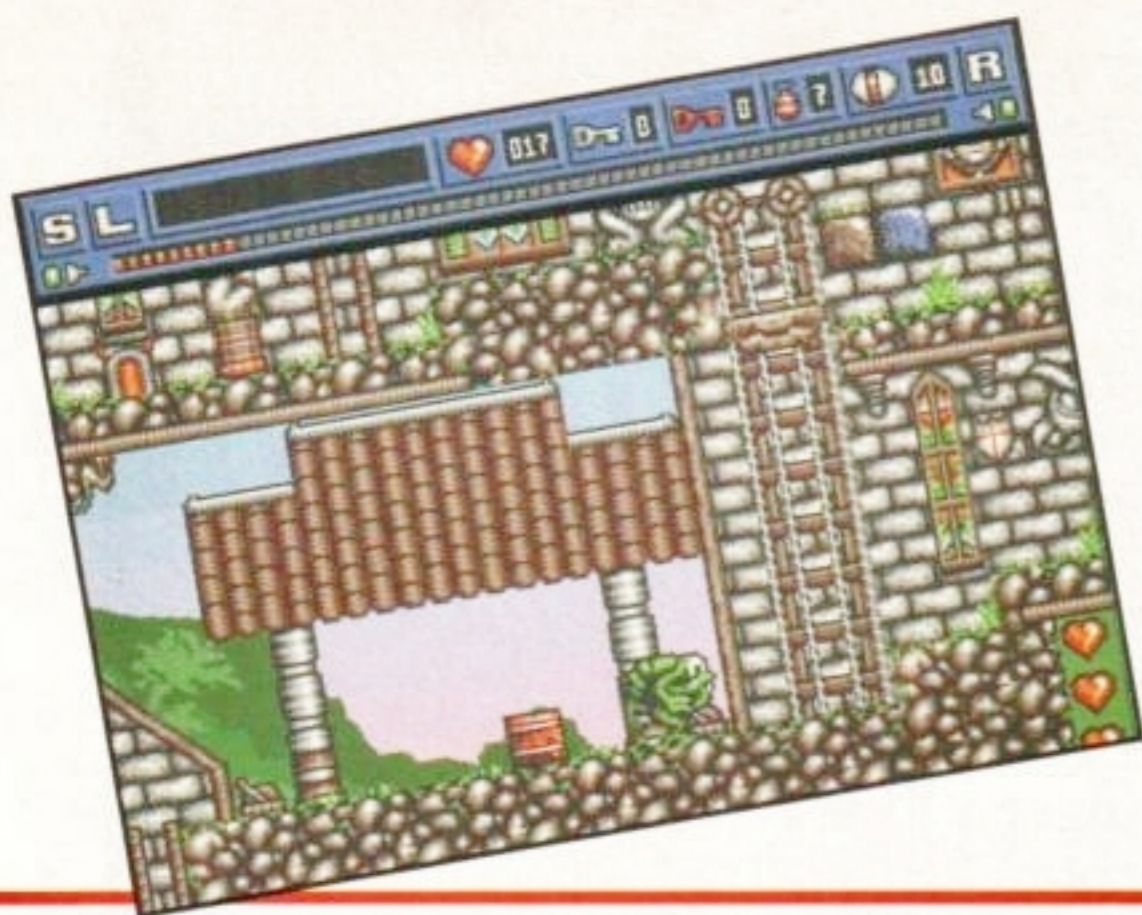
Bograts is a game of skill and fast thinking. You're a parent Bograt whose two offspring have bunked off on their own little adventure. They're easily pleased though, simply walking backwards and forwards *Lemmings* style, until something blocks their path – even if that's a fire! Your job is to save them by ensuring the path is safe.

That's right – it's a puzzle platformer and we've got a four level demo for you to explore. To play the game, simply boot the Coverdisk and let it load. There's also another game demo so you will be asked if you want to play *Bograts*. Answer Yes by pressing "Y" and then press <Return>.

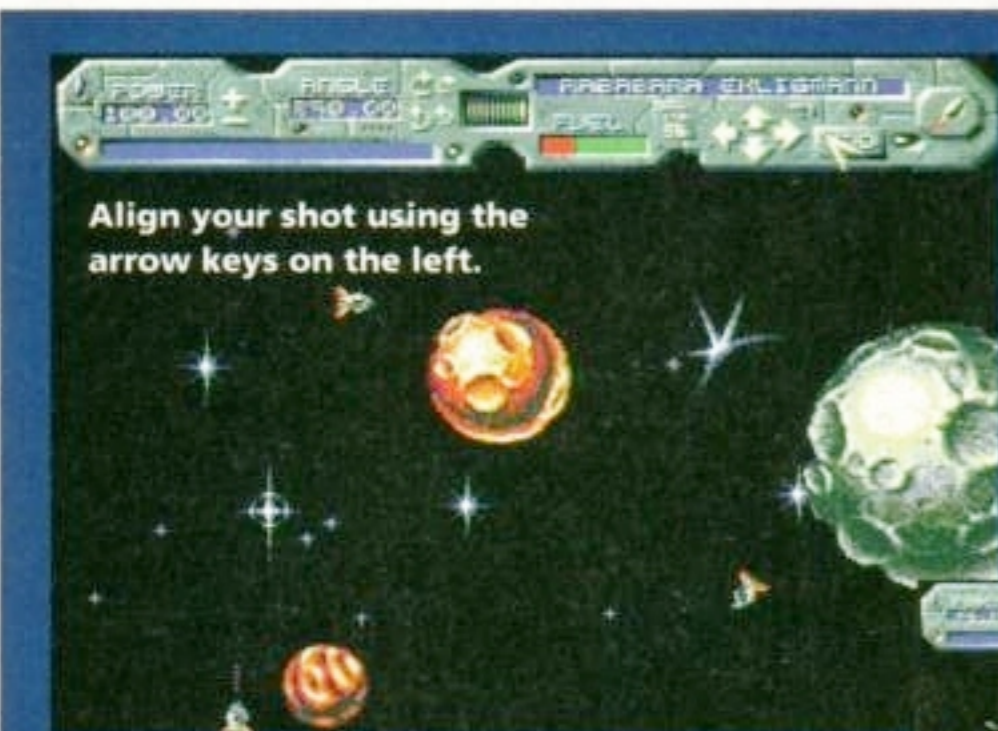
When the first screen comes up, hit fire to continue. When the first level has loaded, you'll see the large green, erm, Bograt. In order to complete the level, the objective is not for you to find the exit but for you to get your kids to it. This doesn't matter in the first level, which is fairly straightforward, but it does later on when you can't actually get through to places that your small children can. That is an essential thing to remember – just

You need to look out for map icons – like this one nestled between the hearts.

Just because you're stuck somewhere doesn't mean your smaller, thinner kids are.



You've got your free software and your exciting new game demos. Now find out how to get the most out of them.



Align your shot using the arrow keys on the left.

GRAVITY FIGHT

If you don't have an A1200, then don't despair. There's also a demo of this two-player *Scorched Tanks* space age game. It requires just a 1Mb Amiga and the demo has you playing against the computer. To get started, just boot the Coverdisk, answer "N" and press <return> - then you won't load *Bograts*. You can't load this directly from Workbench as it's been archived in to fit it on the disk. If you want to install it onto a separate disk or your hard drive, then do the following: Open a Shell and type: `af93b:c:\unlzx x af93b:gf.lzx ram: <return>`. The program will be unarchived to RAM and you can copy the directory out of there yourself. This is also necessary if you want to read the documents.

The game gives you control of a set of space ships. The first thing you have to do is decide the angle of the shot (using the rotation icons in the top left). You must remember to aim around the planets. When you have done this and set the power level of the shot (which decides how far the shot will travel), you can click on the fire button in the top right. If you need to shoot over the top of a

planet, you need to make sure that your shot has enough power to get over it, but not so much that it just shoots off the screen. The planets all have gravitational pull - the bigger the planet, the greater its attraction. This means that your missiles don't fly straight and you'll have to judge the best way of compensating.

When you have finished your shot you can swear loudly as it flies past its destination - it will take a bit more practice to get used to the effects of gravity.



After the shot you can move your ship around to a better position using the arrow keys you can see in the control bar. In the firing stage these can be used to scroll around the screen. You have a set amount of fuel you can expend, but note that putting yourself in a better firing position may also put you in a better place to be shot at!

If you like this, you can register for the full version, which comes with loads of different levels and a two player competition mode

which allows you to play against your friends. You need to send 12DM (about £5) to the author, Thornsten Grosch. The address is: Habichtweg 11, 63322 Roedermark, Germany.

The game itself can be run on a standard A500, but unfortunately the disk had to be made using the A500+ FFS system which allows an extra 50K to be stored. If you have a friend with a WB2 machine you can de-archive it on that as described above and put it on a OFS WB 1.3 disk for use on your machine. Then boot Workbench and load it up from there.

because there isn't a way through for yourself doesn't mean that they cannot complete the level.

You need to make use of the levers and objects on the screen to help your kids on their way. For instance, to release them from the first prison, you need to stand over a lever and press fire. The wall will be raised and the children will walk out. They will walk until they hit an object and then turn and walk the other way ad infinitum, unless they run into something that kills them. If they do get killed, they will be re-incarnated but it will cost you some of your hearts.

These red hearts indicate how much energy you have and they can be found around the screen.

You need to collect as many as possible - they also enable you to save the game. As well as these red hearts there are three other things that you can either collect or utilise:

1. BOMBS

Bombs are useful for destroying certain blocks. To use a bomb, press fire and then run away. You have about two seconds before it goes off and if either you or your children are over it then you lose a life.

2. MAP ICONS

If you go to one of these and press fire, you will enter map mode and be able to scroll around the screen to see where

your kids are and what obstacles they need to overcome. To return to the action screen press fire.

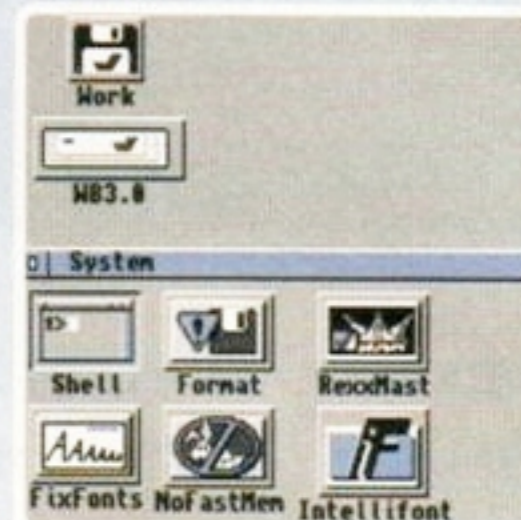
3. KEYS

Make sure your wee ones collect the keys before moving them along. If you do realise you've messed it up, restart by pressing the Space bar and then move to the R icon and press fire.

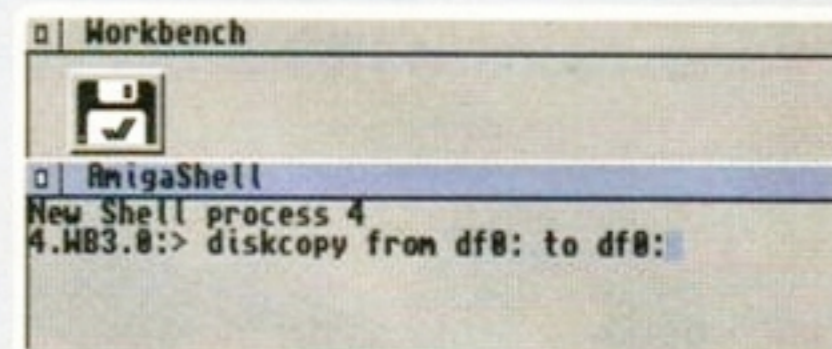
If you want to install the game to hard drive, copy the game, and the -S- and -V- directories, into a directory. The game itself costs £12.99 from Vulcan Software Limited, Vulcan House, 72 Queens Road, Buckland, Portsmouth PO2 7NA 01705 670269. Credit cards are also accepted.

BACKING UP YOUR COVERDISK

Copying your Coverdisk is really very simple. Just follow the stages below...

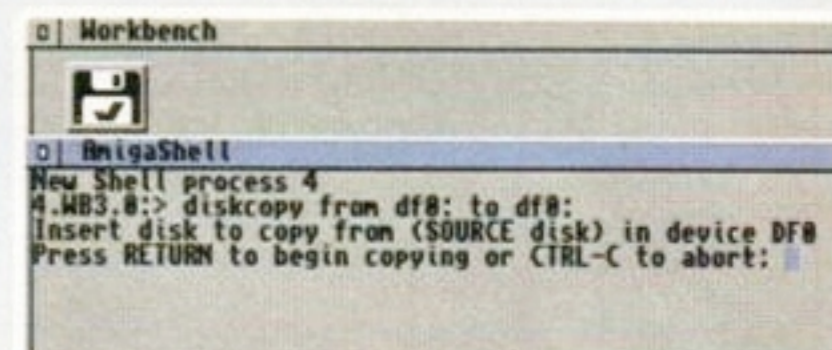


1 Boot up with your Workbench disk and find the Shell icon, in your system drawer. Double-click on this to go into the Shell.

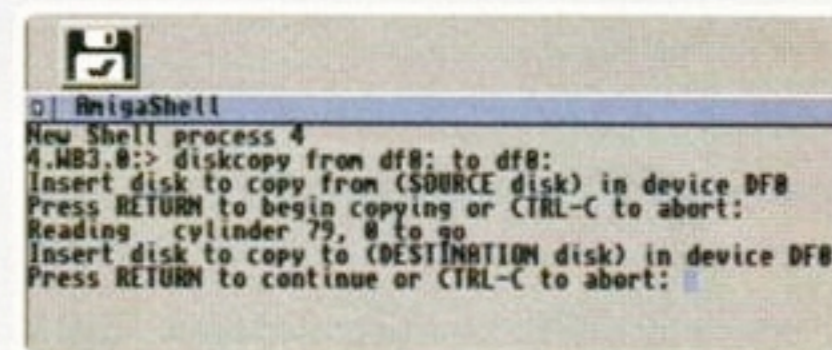


2 Type in the following line (with a zero, not the letter O), taking care to put the spaces in the correct places:

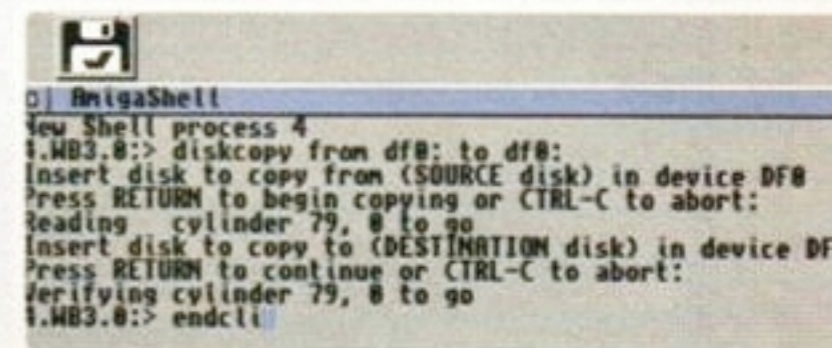
DISKCOPY FROM DF0: TO DF0:



3 When asked for the Source disk, insert your write-protected Coverdisk and press Return. All of the info on this disk will then be copied from the disk into memory.



4 Once your Amiga has read the info, it will ask for the Destination disk. Insert it and press Return. All information on this disk will be destroyed.



5 On an unexpanded machine, the Amiga may ask for the source disk again, because it copies in chunks. Finally, type **endcli** to close down the Shell.

DISK NOT WORKING?

We take every care to test the Coverdisk software, but Future Publishing cannot accept any responsibility for any damage occurring during its use. If your disk is faulty, send it back, with 2x26p stamps and an SAE to:

Amiga Format (insert name of disk)
TIB PLC • TIB House
11 Edward Street
Bradford • BD4 7BH

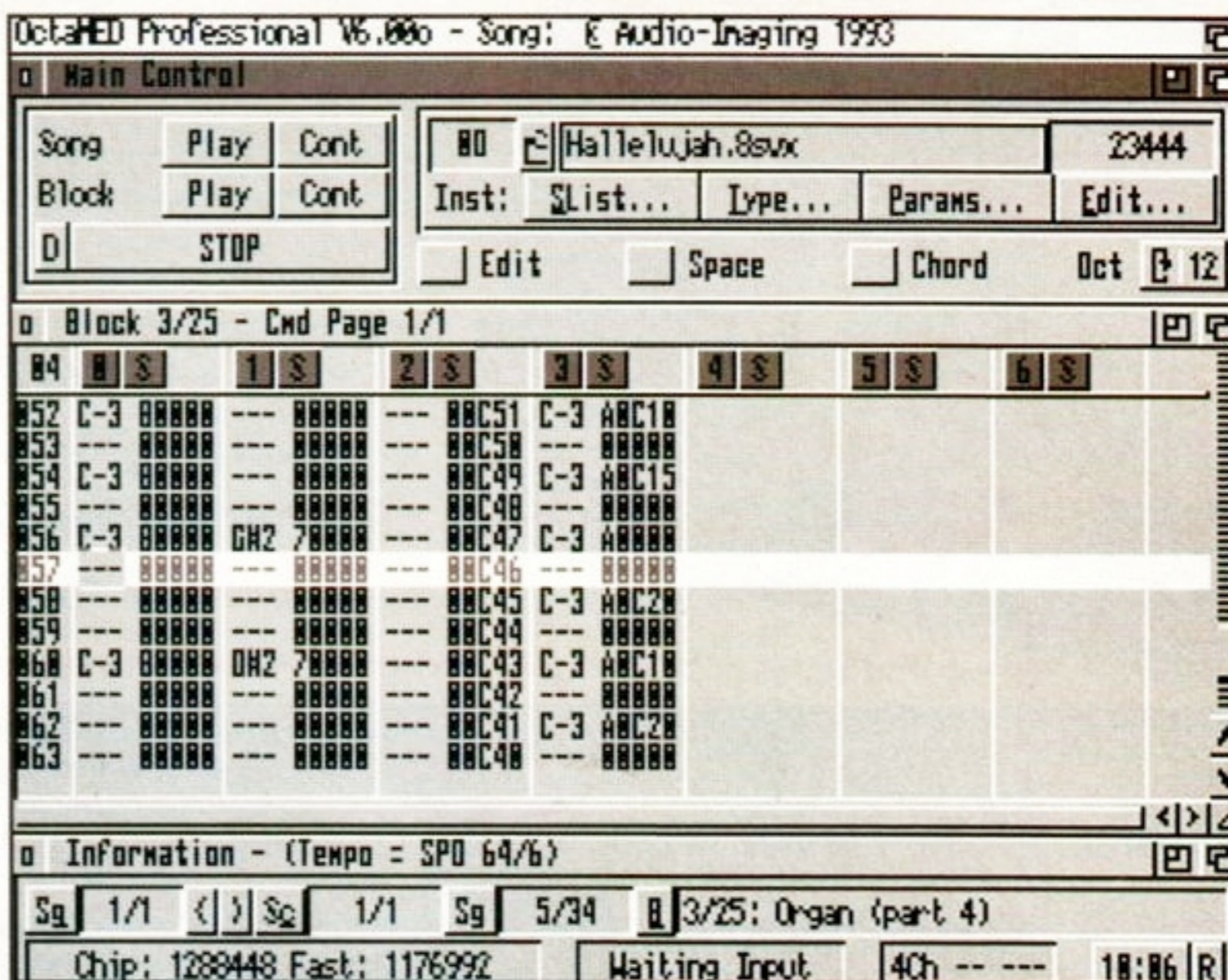
If there is a manufacturing error the stamps will be returned with a replacement disk.

See our detailed feature on **PAGE 18** for more advice on using OctaMED

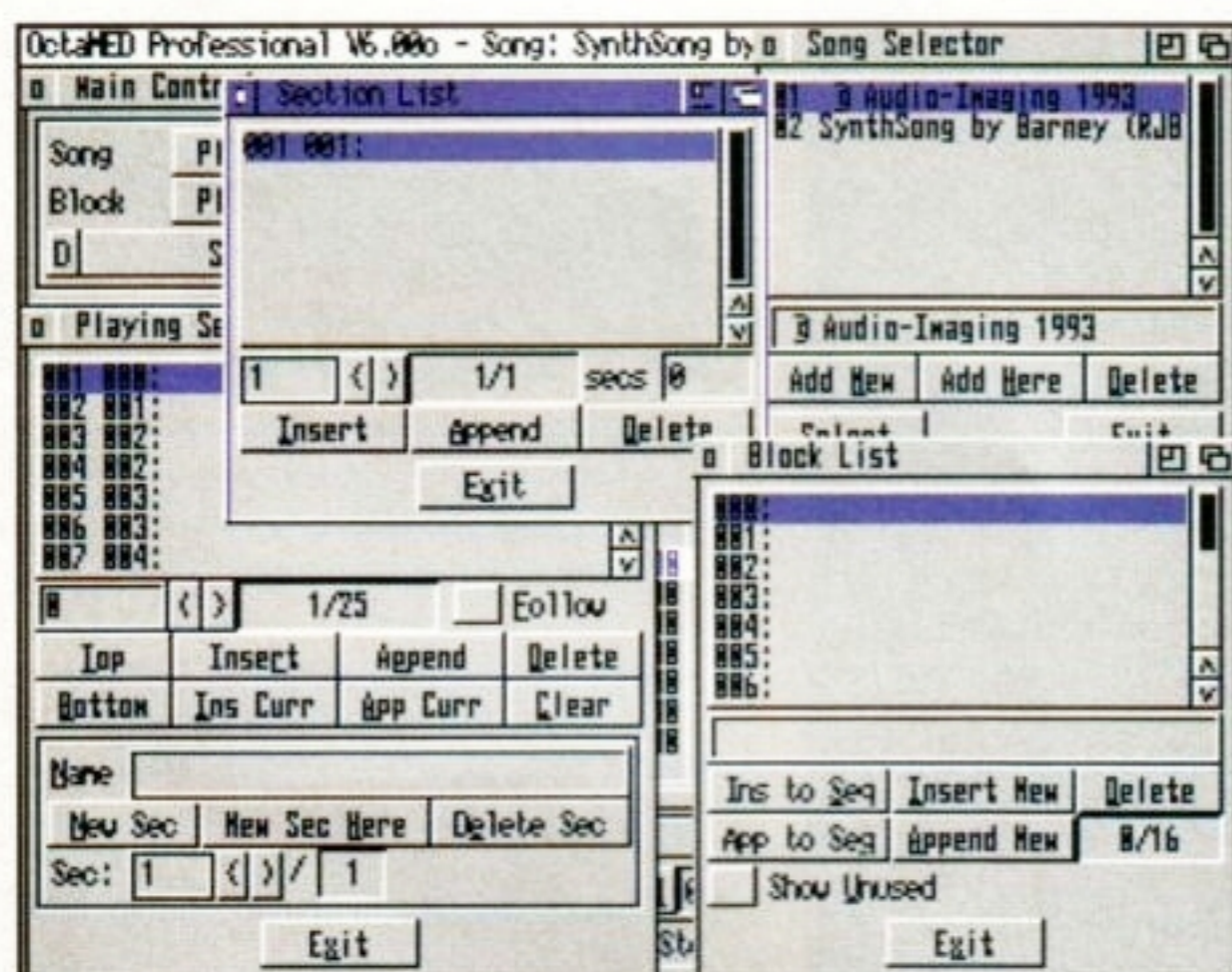


The OctaMED screen has the three main windows open by default: the Main Control, the Block and the Information windows.

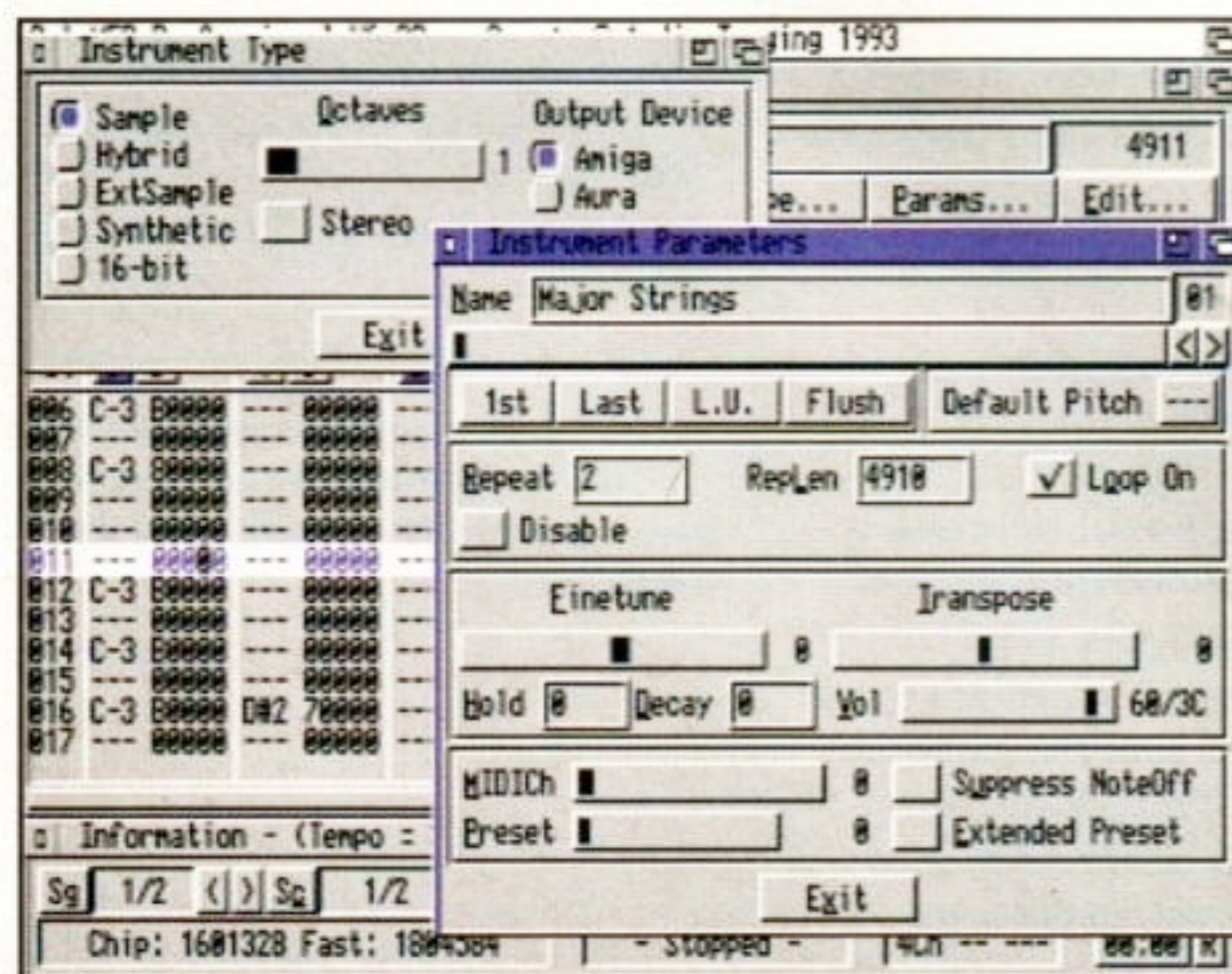
In an exclusive deal *Amiga Format* brings you the latest version of the Amiga's favourite music program **FREE** on your Coverdisk.



OctaMED 6



The Information window allows you to open the four song controlling requesters, like the Block list and the playing sequence.



The Instrument type and parameters windows can make adjustments to the sample types and fine tuning of them.

Mention music on the Amiga and there is only one word that immediately springs to mind – *OctaMED*. It has always been one of the Amiga's most popular programs not least because it manages to combine powerful music creation features with an easy to understand interface.

To install the software you'll need to unpack the disks from the Coverdisk. This will be done automatically by booting the disk. Make sure you have two spare disks ready – these will be automatically formatted and the software installed onto them. Next you need to boot Workbench, open Disk 1 and double click on the Install icon. This will give you three choices – you can install to a bootable floppy, a non-bootable floppy or a hard drive. You can also install the two disks directly to a hard drive, but you will then have to copy the files manually to the correct destination as the Install script won't work here. To help you do this, you'll find a log in the directory you install to, which gives you details of where all the files are copied to.

WINDOWS

When you have the program installed, simply load it up and you'll see the three windows used in the main editing part of *OctaMED*. In order to start creating a song, you need to understand the methods behind modules. *OctaMED* songs are made up of a set of blocks. These blocks are, by default, divided into 64 lines, each line containing information about the sound to be played. There are, again only by default, four channels on each line, which means that you can have

four different sounds playing at the same time. You can actually have up to 8 channels playing at once and can change the setting for the song by choosing Set Options from the Song menu (Keyboard shortcut: R-Amiga H). On each one of the cells that this grid creates, you can enter a sound, which will most often be a sound sample. Sound samples are the most common type of instrument used and you can see a few in the sample songs provided. If you need more, then search through CDs, the Internet or contact a PD library. Of course, if you have a sampler, you can create your own – read on.

To load a sample, you need to click on the File requester icon in the top middle of the top window (it's the only icon on the screen without letters in it) or you can select Load Instrument from the Instrument menu. With a sample loaded, you can start making music. Try playing with the keys on the keyboard and the sample will be played as different notes. The keys for the lower octave are: S, D, G, H, J, Z, X, C, V, B, N, M. The middle octave is: 2, 3, 5, 6, 7, Q, W, E, R, T, Y, U, L, ;, ., / . The upper half octave is: 9, 0, +, \, I, O, P, [,], . When you want to place a note into a cell, you need to switch to editing mode, by clicking the Edit button. Then select the cell in the Block window and press the key you need. Remember that a sample will play for longer than a single cell – it will often play through ten or more. To see how long it plays for, click on Play Block. Hooray! Your first note is entered.

There are lots of options that can be associated with notes, and effects that can be entered into the player,

PLAYER COMMAND TYPE CODES

The first two digits denote the player effect and the second two the intensity. The following is a list of the hexadecimal codes for the effects.

- | | |
|-----------------------------------|----------------------------------|
| 00 Arpeggio | 0E synth jump |
| 01 Slide pitch up | 0F Primary tempo |
| 02 Slide pitch down | 11 Slide pitch up once |
| 03 Portamento | 12 Slide pitch down once |
| 04 Vibrato | 14 Protracker style vibrato |
| 05 Slide pitch and fade | 15 Set finetune |
| 06 Vibrato and fade | 16 Repeat lines (loop) |
| 07 Tremolo | 18 Cut note |
| 08 Hold and decay | 1A Slide volume up once |
| 09 TPL slider | 1B Slide volume down once |
| 0A Volume slide | 1D jump to next playing sequence |
| 0B Playing sequence position jump | entry |
| 0C Set volume | 1E Replay line |
| 0D Volume slide | 1F Note delay and retrigger |

using the Player Command type. You'll see that when you enter a note, a letter and number combination appears. This shows the note name and the octave number. Next to this is a set of five digits, which will appear as zeros by default. The first shows the instrument number and the following four digits can contain a hexadecimal code which will set a user effect. To see a guide to the hexadecimal codes, read the Player Command Type Codes box. Typically a code will look something like "10C30".

You should note that above each of the channels the number of the channel is shown and that it is actually a button. These will normally be highlighted as active. In order to hear how individual channels sound, simply deactivate the channels you don't need.

SING SONG

At the bottom of the screen, you'll see the Information window, as a thin strip. This window contains all the important controls for the song. On the very left is the song listing button. Click on this and it will show the songs loaded into memory - if you have enough RAM, you can have more than one. To add a new song, you click on the Sg icon and the song selector requester will appear. If you click on Add New, a second song will be entered into the list - if you want you can then load a song into this slot. Next along is the Section list (icon Sc) which can be used in a similar way to the Song requester to add new sections to songs.

On the far right is the B icon which will open the Block List icon. This requester allows you to add new blocks to the song. Selecting the different blocks will change the block shown for viewing or editing in the Block window. Each block can be named and sequences of blocks can be kept together so that you know which blocks are Synth or Organ ones for example. This list does not refer to the playing order of the blocks within the song. This is decided in the Playing Sequence window which is loaded from the icon

on the left of the Block icon, named Sq. In this sequence you can insert or delete blocks and you choose the block to be played in the space using the arrow keys in the window on the top left under the playing sequence list.

Separating all of these icons are small cells which display information about the currently selected song, section, playing block and which block that is. Underneath is a memory meter to show how much memory your song is using. The rest shows information about the playing state, the editing state and the time through the current song.

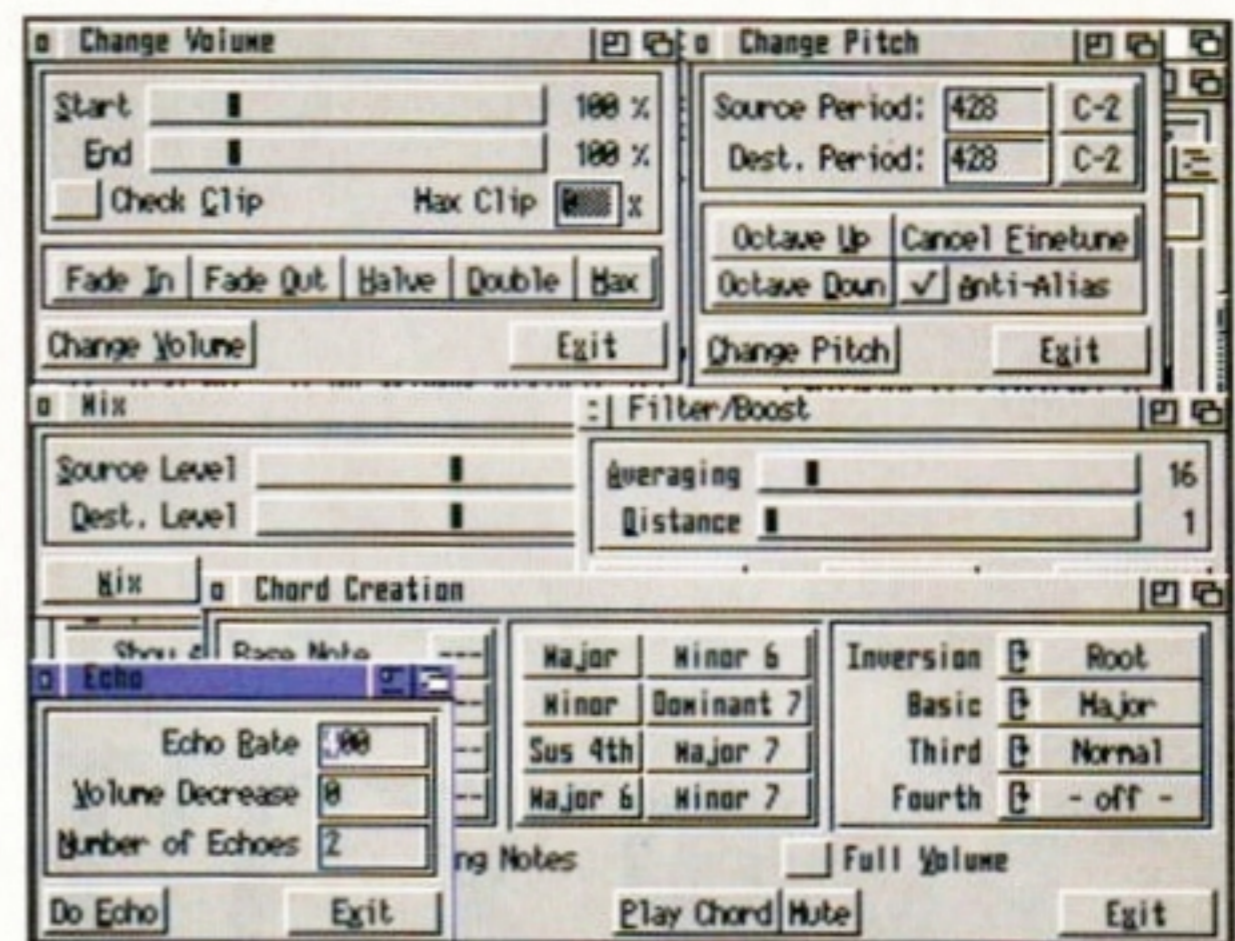
In the Main Control window, where you loaded the sample instrument, you will see more controls. These allow you to make changes to the instruments used. There's an Instrument Type for adjusting the setting and also Parameters for doing things like fine tuning the instruments and adjusting the names. You can move through the instruments using the arrow keys in the window.

Perhaps the most important window for instruments is the editing window. This brings up the sample editor which is an integral part of *OctaMED 6*. This window has its own set of menus including things like a set of effects. You can change the volume and pitch of samples, filter them, add echoes and much more. Samples can be cropped and parts can be cut and pasted. For close in editing, zoom in to see more detail of the samples waveform.

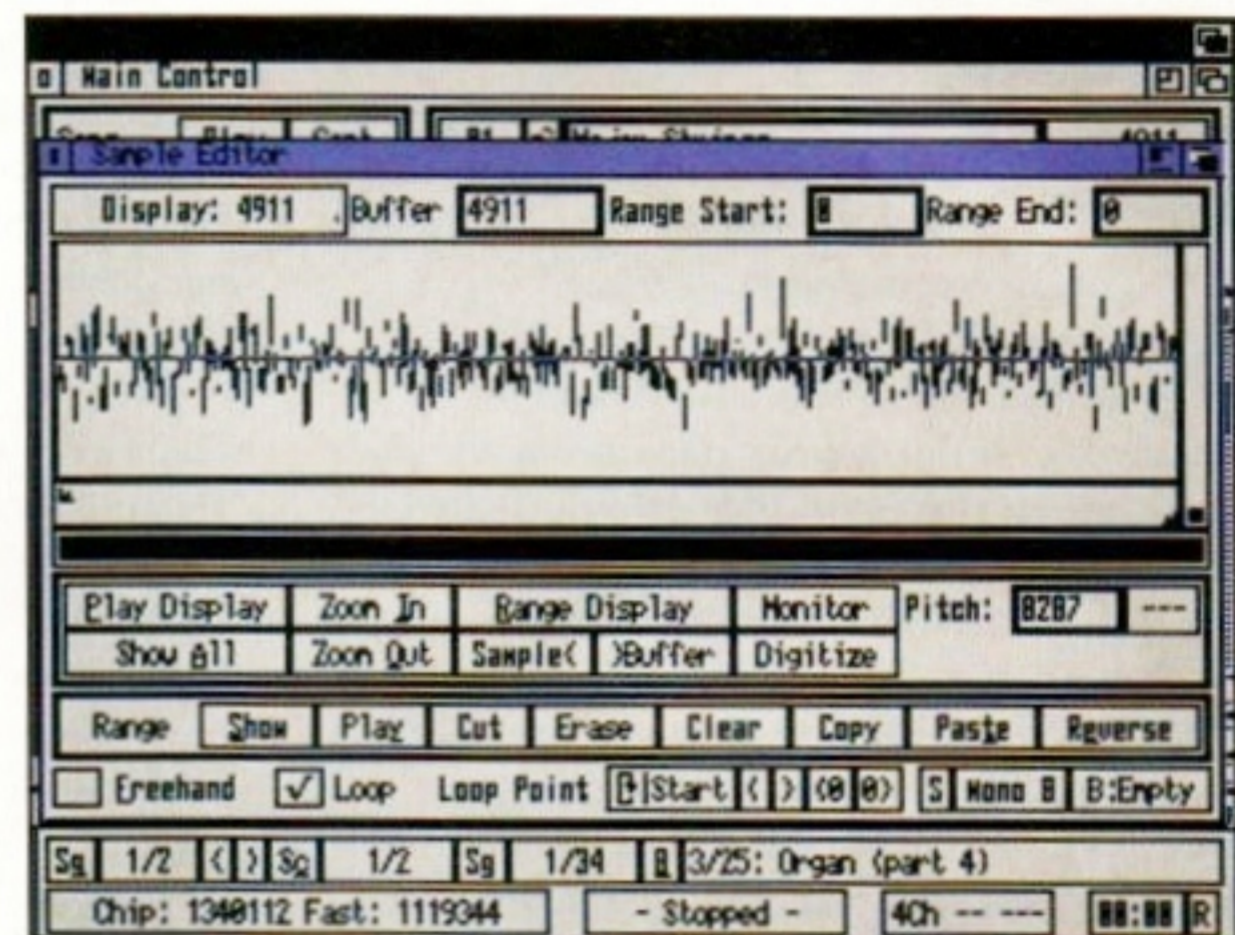
SAMPLING

Should you want to sample your own instrument, you can do so using the Digitise button so long as you have a compatible sound sampler. In the settings for the sample is the option to show the sample in hertz, which some people might be more accustomed to.

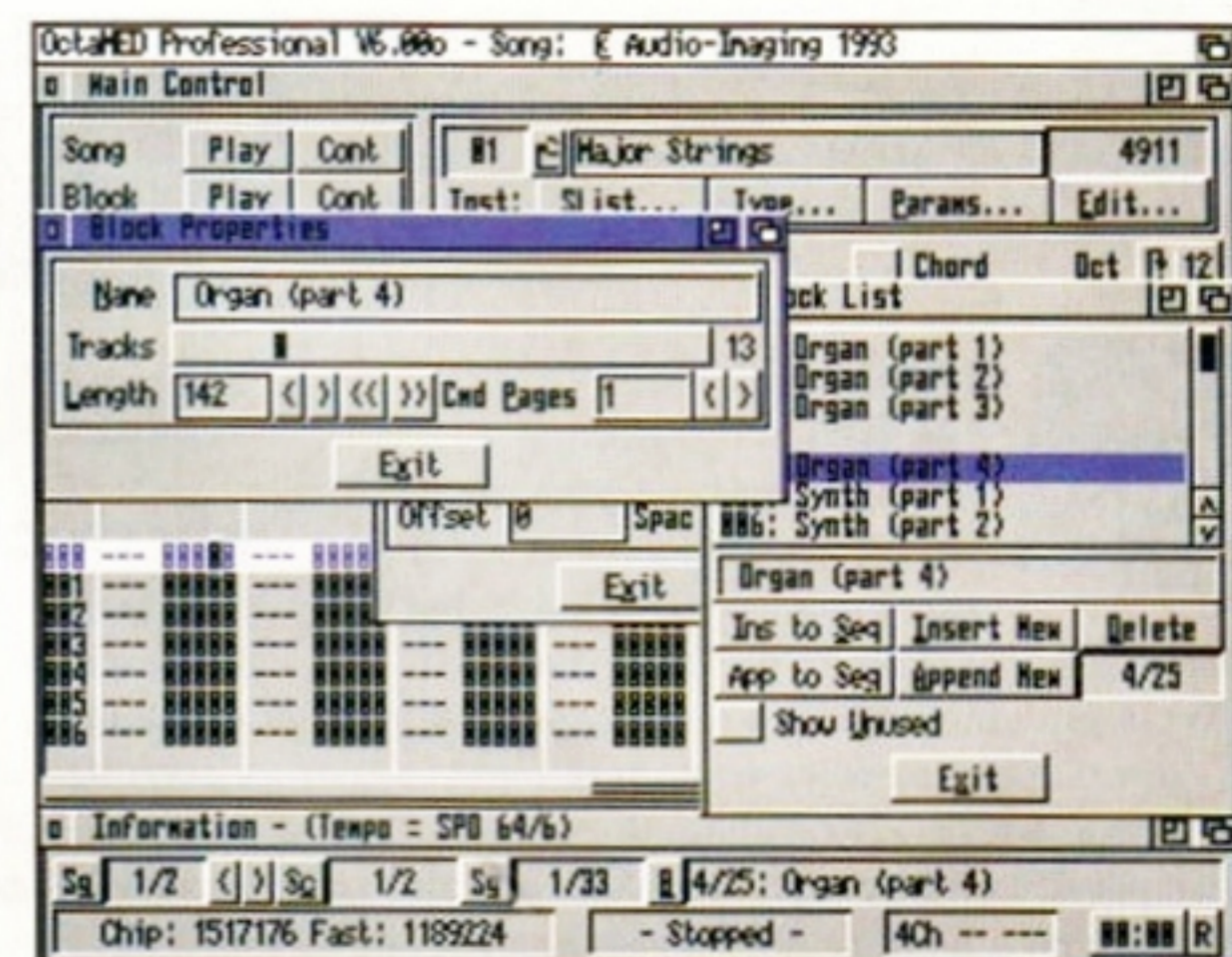
There are a couple of sample songs included, which is a good place to make a start at seeing how the whole thing comes together. If you do get stuck, you can load in the *OctaMED* help file, but some machines may have font problems



Within the Sample Editor are a set of effects with their own requesters loaded from the Effects menu.



The Sample Editor opens up a separate window and allows you to cut, paste, zoom in and adjust all elements of the sample. You can even use it to sample your own.



Properties and settings are available for all the different types, like blocks and songs, so you can set different numbers of channels and the like.

loading it. If this is the case, then simply load it into a word processor instead. If you want to see what the keyboard shortcuts are for operations, then select the Keyboard Short-cuts item from the Settings menu and you'll see where they are assigned and make any changes you want.

Obviously there are many more features, like ARexx, which there simply isn't room to cover here, so you'll have to experiment a bit and read the documentation. Lastly, this is not the latest version of *OctaMED*. The whole new *OctaMED Soundstudio* is now available at a special AF price - see page 23 for details.

AMIGA FORMAT COVERDISKS

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0191 584 0682



Your Coverdisk should be working fine, but if it's not, these hints, tips and corrections should sort out the problem quickly and easily.



FINAL WRITER 4 LITE (AF82)

If *Final Writer's* pull-down menus won't pull down it is probably because you are running a menu enhancement commodity (i.e.

MagicMenu). Such programs don't work correctly with *Final Writer* and should be disabled. In order to print documents it is vital you have the correct printer driver installed in the devs/printers drawer of your Workbench disk and that the driver is selected and configured using the printer prefs utilities. Your Workbench manual describes how to do this.

To print larger documents *Final Writer* requires more memory. If you're using the program on a 2Mb machine, try to maximise the amount of memory available by removing any utilities or commodities running in the background – if you still experience problems, use Workbench's prefs utilities to alter the screen to a lower resolution screenmode. Lastly, it was inadvertently stated that *Final Writer* works on all 2Mb+ Amigas. Sorry, but it's incompatible with old Kickstart 1.2/1.3 machines.



BREED 96 (AF86)

If when double clicking the *Install_Breed96* icon you get an error message telling you that the command *IconX* cannot be found don't panic.

This doesn't mean that your Coverdisk is faulty, it's just that some earlier versions of the Workbench disk don't contain the *IconX* command. To get around the problem; from Workbench open up a Shell window and type the following lines (pressing return after each):-
copy c:execute RAM:
cd RAM:

execute AF86b:Install_Breed96
Have your blank formatted disk and your *Breed 96* disk ready and insert the appropriate disk when prompted. Please note that even though the label for the *Breed 96* disk says "AF86a" it is, in reality, disk number AF86b.



OCTAMED TUTORIAL (AF86)

If you are a Workbench 3 user experiencing problems in trying to read the *OctaMED* tutorial

guide document then try changing its icon's default tool from "Amigaguide" to "MultiView". If you are unsure of how to do this don't worry it's not too difficult. Click once on the icon called *OctV5_Tut.Guide*, pull down the "Icons" menu from the menubar at the top of the Workbench screen and select the "Information" menu item. This will bring up a window, in which halfway down you will see the words "Default Tool:" followed by a small box containing the word "Amigaguide", clicking in this box will give you a text cursor, now using the backspace and del key erase completely the word "Amigaguide" and type in the word "MultiView", press return then click on the Save gadget (bottom left corner).

It's worth remembering that the same solution should work for other Coverdisk document files that try to load tools (e.g. *Muchmore*) that you don't have.



TYPESMITH (AF87)

We apologise to any readers with older machines who have had problems with this disk.

We failed to state clearly, that unfortunately *TypeSmith* is incompatible with old Kickstart 1.2/1.3 machines.

MISSING TOOLS?

A common problem is that not everyone's Workbench disk has a copy of the Amiga *Installer* tool on it. Once unpacked, some Coverdisk software needs "installing" before it can be properly used. The authors often include a script that will copy the required libraries, fonts etc. to the correct place on your system. The icon for the script is usually a picture of a floppy disk with a wire and plug coming out of it. If you get an error message *Unable to open your tool 'Installer'* when you double-click such icons there is a solution. You need to find and then copy the *Installer* tool from another disk to your Workbench floppy disk or Workbench hard disk partition. If you are using floppies then use a copy of the Workbench disk and not the original, also you may need to make some space on your copy of Workbench by deleting some non-essential tools such as the clock, calculator etc.

The Amiga Format Coverdisk 79a, *Digital Organiser 2* demo and the AF Coverdisk 88a,

X-DVE, both have the *Installer* tool on them. If you don't have either of these Coverdisks then try searching for *Installer* on disks belonging to other applications that you own, especially paint programs and word processors etc.

Installer doesn't usually have an icon and is often in a drawer such as the C drawer which itself rarely has an icon. So when looking for it make sure that you switch on Show:All Files from the Workbench Window menu for every disk and drawer you look through. When you find *Installer* simply copy it by dragging its icon into the Utilities or C drawer of your Workbench.

GENERAL PROBLEMS

The most common problems are Read/Write or Checksum errors which occur during the decompression process. It is important to note which disk is in the drive when such errors occur – is it the Coverdisk or one of your own disks? If it's one of your own disks then that's the disk with the problem. Did you format your blank disks correctly? Try re-formatting them and do a full format not just a quick format, use the verify option and make sure you format from your Workbench, not from utilities like *X-Copy*. Disable *Directory Caching*, *Trashcan* and *International Mode*. Don't dechunk to HD (High Density) disks as these can be unreliable. Always write protect and back up your Coverdisk before you use it.

FAULTY DISK?

Please remember that the technical helpline above is purely for difficulties you have getting the programs to work properly. If your disk is physically damaged, bent, broken with a loose or missing shutter, it should be returned to the duplicators for a replacement at the following address:

AF DISK NUMBER XX
TIB PLC
TIB HOUSE
11 EDWARD STREET
BRADFORD BD4 7BH

This includes any system messages you may get saying: "Read/write error", "Disk invalidated" and "Checksum Error". In this case, the disk has been damaged and needs to be replaced.

JANUARY 1997

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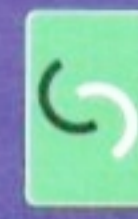
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It's certainly the most polished and playable in this particular genre." **AMIGA GAMES AWARD CU AMIGA:** "Amazing animation speed. Speed, speed - eat your heart out Super Street Fighter 2." **Technical requirements:** AGA Amiga (1200 / 4000 / CD32 with hard drive). Hard-drive is necessary. About 15Mb of free space needed. FAST RAM is not necessary (but recommended). **AMIGA COMPUTING:** The other levels are graphically outstanding, with either fog, mist, or thunder and lighting effects. The work that has gone into the graphics is certainly committed, and this is partly what makes Capital Punishment a great game. It has been developed by a team who are greatly devoted to the Amiga. **AMIGA JOKER MEGA HIT AMIGA COMPUTING (Greece):** "Amazing stereo sound, unbelievable, realistic effects...the game Capital Punishment will for sure be one of the biggest successes of this year." **AMIGA FORMAT GOLD** Capital Punishment is one of the finest games on Amiga." **AMIGA FORMAT: PLAYABILITY 9** Capital Punishment is a great game for a descent beat-em-up in that you can learn to do better, effort is rewarded and skill is a big part." **AMIGA COMPUTING:** Special effects: fog, light diminishing, morphing, slow-motion replay; realistic blood animation; red screen flash after every blow; screen shakes after a player is punched or falls; screen scroll with every move. A unique zoom effect to maximize the combat experience through an advanced collision detection system using four cameras (head, torso, legs, and attack) for every character in every frame. **AMIGA COMPUTING:** Fans of Body Blows and Mortal Kombat cannot fail to be impressed with Capital Punishment's overall quality. **AMIGA GAMES (Germany) Overall 94%** **AMIGA FORMAT:** "It all looks gorgeous. Light tricks make it look even more gorgeous. ClickBOOM have done wonders with Capital Punishment in the graphics dept. The sprites are excellent, the backgrounds are excellent and generally everything looks terrific. What you can't see from the screenshots is the smoothness of the animation or the little graphic tricks that have been included. All the characters move extremely fluidly. All the moves are executed quickly, smoothly and believably. The graphics trickery is a joy as well. Swinging and swaying shadows, dark rooms which only become lit when the lightning outside flashes and eerie cut-scenes all put together to make this one of the most atmospheric beat-em-ups you could wish to see." So, you are you still reading this ad? You must be very interested in the game. Right? Well, go and buy it. Now! :) **AMIGA COMPUTING:** One of the best games of all time. Roll on Capital Punishment 2!" Semi-transparent 3D shadow that casts itself on the characters and the floors by following the characters' movements at the rate of 25 frames per second. **AMIGA ACTION: OVERALL 95%** **AMIGA FORMAT:** "It's this kind of thing - being able to fake fatigue and such that sets Capital Punishment apart from the ordinary and elevates it to a Format Gold. Knock an opponent onto the deck and you can still charge into them while they're on the floor, and continue kicking and punching them. Great stuff. In two player mode (or three or four if you fancy, because there are league and tournament modes to play around with too) it's excellent fun. Take the time limit off and you can play for as long as your hands can stand it without cramping up." **CU AMIGA SUPERSTAR AMIGA JOKER (Germany):** "A clean technical KnockOut!" **AMIGA FORMAT GOLD AMIGA COMPUTING: OVERALL 95%** **CU AMIGA SUPERSTAR CAPITAL PUNISHMENT IS THE HIGHEST RATED GAME OF 1996**



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